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CANADA
MEDICAL RECORD

JANUARY, 1898.

THE SECTION OF OBSTETRICS AND GYNÆCOLOGY.

By W. JAPP SINCLAIR, M.D.,

Professor of Obstetrics and Gynæcology in Owen's College, Manchester.

When I received the flattering invitation of the Council of the British Medical Association to occupy this position to-day, which is to me one of distinguished and, I fear, unmerited honor, I began to debate with myself whether I ought to take advantage of the privilege granted to me to open the proceedings of this Section with an address. The occasion seemed at first too great; no subject within my range of ideas appeared adequate. It did not seem fitting that I should take advantage of a meeting of such unique interest—a British Empire Meeting during the Queen's Commemoration Year, in this already historic centre of commercial and intellectual achievement in the greatest of the British Colonies, to give utterance to a formal discourse of mere academic interest, chosen without spontaneity, and laboriously compiled in the library. After much cogitation, however, the feeling grew upon me that there had been in my mind more or less continuously in recent years a subject sufficiently interesting to myself and sufficiently general for the occasion. The subject is so important in its far-reaching, practical bearings in obstetrics and gynæcology that I became convinced you would hold me justified in pressing it upon your attention, and would find in the interest of the subject matter some measure of excuse for the inevitable shortcomings in my method of handling it. The subject to which I refer is that of the *Injuries of Parturition, the Old and the New*; and I may state at once at the outset that the reason why it has haunted my mind is the frequency with which, as a gynæcologist, I am called upon to deal with injuries produced by parturition, and the growing conviction that in many, if not in the majority of these injuries, their existence has not appeared to be

altogether satisfactorily explained as inevitable, and not a few have been proved by irrefragable evidence to be produced by operative proceedings altogether unwarranted by the circumstances.

A Comparison and a Contrast.—My position will be made more clear by one or two examples, and these lead me *in medias res*. Some time last year I was asked to see a young primipara who was very ill towards the end of the first week of the puerperium. When we met in consultation I was informed by the practitioner in charge that the case had been quite straightforward, from first to last, and in answer to my enquiries he could not in any way account for the patient's condition, which was as serious as it could be even in a case of the kind. It appeared, in fact, almost or altogether hopeless. On making a physical examination without moving the patient from the dorsal position, I discovered a deep and wide laceration of the vaginal vault, the examining finger passing easily into the tissues of the parametrium. No mention of forceps was made in the conversation we had before seeing the patient, and it was only after the examination and in reply to a question that my colleague explained why and when they had been applied. It seemed to me at the time that he thought the completion of labor by means of the forceps such an insignificant detail that he forgot to mention it. The child, in this case, was saved, but the mother died.

A few years ago I felt called upon to make several repairing operations on the injured pudenda of a young married woman who came under my care as a hospital patient. She had been by all accounts perfectly sound and active a year before, but meanwhile she had got married and she had become a mother. When I first examined her the uterus was found to be completely prolapsed, and it was so lacerated that the anterior and posterior halves of the cervix projecting from between the nates looked like two separate organs, and the perineum was torn completely through into the anus. This patient then suffered from dislocation of the uterus, transverse laceration of the cervix and complete rupture of the perineum. She was treated by Emmet's operation, restoration of the perineum and shortening of the round ligaments, and then she was fairly comfortable with a pessary. I learned afterwards that this case had been one of normal labor in a primipara, and that the delivery had been effected instrumentally by a *locum tenens* within six hours from the commencement of the pains.

Let us now compare this sort of practice, still possible at the present day, in spite of all our anæsthetics, antiseptics and perfected scientific apparatus with what occurred in a former and different age.

Mauriceau,* for example, mentions a case "*Du laborieux accouchement d'une femme dont l'enfant étoit resté au passoge, à cause de l'extrême grosseur de la teste.*" He was called in March, 1669, to a primipara, aged 35, who had been in labor eight days. The head was in the cavity of the pelvis, and the child had been dead four days. The patient had been visited and abandoned by three or four surgeons, one of whom had made an incision into the soft parts of the vulva. The obstruction arose from the large size of the child's head. Mauriceau perforated and extracted with the crotchet, and the woman who appeared to be moribund when the accoucheur arrived, lived on for eleven days, ultimately dying of "*une grosse fiévre qu'elle avoit cinq ou six jours auparavant.*" From this circumstance Mauriceau concluded that the patient might have escaped if she had been delivered two or three days earlier, that is to say, if she had been in labor only five or six days.

He relates another case "*De l'accouchement d'une femme qui eut un très-laborieux travail.*" It was that of a primipara, aged 28, who had been in labor two entire days after the rupture of the membranes. There had been ten hours of very strong pains. The head was low down in the vagina and had rested there for twelve hours. The pains had now ceased. "*Quoique sa Sage-femme luy eut donnè deux clysteres assez forts, pour tâcher de luy exciter de nouvelles douleurs, et qu'elle l'eût fait aussi saigner du bras suivant mon conseil.*" . . . Mauriceau ordered a strong dose of senna to be administered, and two hours afterwards a powerful clyster. Pains then came on, and the patient was delivered without more ado, "*d'un gros enfant mâle, qui etoit encore vivant.*"

Here then, we have two extremes of practice contrasted, the helplessness of the seventeenth century, and our own resourcefulness at the end of the nineteenth, and yet it may be alleged, not without reason, that there is to be seen in the contrast only one more illustration of how "knowledge comes but wisdom lingers." Such results of our modern practice as I have given in illustration do not make it so perfectly obvious that in obstetrics we are much wiser than our sires.

The work of Mauriceau from which I have quoted, contains the famous case in which he met Chamberlen, who failed to deliver with his forceps a woman with a deformed pelvis, and immediately after fled from Paris.

Mauriceau's practice illustrates, then, that of the age imme-

* Observations sur la grossesse et l'accouchement, etc., Paris, 1715.

diately preceding the introduction of the obstetric forceps. We may divide the century and a half from the introduction of the forceps to the present time roughly speaking into three periods: First, from the introduction of the forceps to the discovery of anæsthetics, about a century; second, from the discovery of anæsthetics to the introduction of antiseptics, a quarter of a century; third, from the general introduction of antiseptics in midwifery practice to the present time, very nearly a quarter of a century.

Now, if we consider our present position, we have much to congratulate ourselves upon, and yet we may fairly ask if there is not much room for improvement in the use which we make of our resources. Is not one of the most remarkable things in the history of medical science, during the last quarter of a century, the extraordinary development of gynæcology in its surgical aspect? Gynæcology flourished and has become largely surgical; so largely surgical that Sir W. J. Priestly, my predecessor of two years ago in the position which I occupy to-day, addressed to the Obstetrical Section a warning and a remonstrance on the too free application of surgical methods to gynæcology. Midwifery has, during the same period, become also largely surgical—too surgical—and a thesis which I shall endeavour to maintain to-day is that gynæcology has become so largely surgical as the direct result of surgical interference in midwifery practice; the accoucheurs are the providers of material for the gynæcologists. I fully appreciate the admirable work done during that time by gynæcological surgeons in dealing with the new growths of the sexual organs, and I do not decry it, but for the material of his ordinary daily labour the gynæcologist has to look to the accoucheur. Last year Dr. Cullingworth did a good service to the medical profession by addressing the Obstetrical Society of London, on the subject of the undiminished childbed mortality in England in spite of our advantages and improved methods of practice. But in addition to the avoidable childbed mortality, there is the very serious question of childbed morbidity, which I maintain and repeat is largely owing to the prevalence of surgical methods in the practice of midwifery. The term "surgical" is employed here with almost exclusive reference to the use of midwifery forceps. It was said by Baudelocque that the midwifery forceps was the most useful surgical instrument ever invented, and with that strong and unqualified opinion we are all more or less in agreement. But like all our powerful remedies, the forceps must be used with circumspection, else disastrous consequences must ensue.

Now the avoidable evils which I maintain are so prevalent at

the present time have developed insidiously and largely in consequence of the resources which have come to us in the evolution of medical science. If we sin, it is against the clearest light. If we trace the history of Obstetrics during the last century and a half, and consult the old and many of the new masters on the subject, we find their opinions are almost unanimous on the limitations and conditions under which the practitioner should resort to his most powerful remedy. There have been from the beginning fluctuations and fashions in practice, but none in theory.

First Period.—In addressing a meeting of English speaking obstetricians one cannot illustrate the theory and pratice of the first period to which I refer without quoting Smellie.* In Smellie's time, the men who practised obstetrics were no longer helpless in dealing with the most frequently occurring cases of difficulty, namely, in tedious labour from inertia, or from disproportion between the fœtal head and the maternal passages. In reading Smellie's collection "of laborious cases when the head of the child is low in the pelvis and delivered with forceps," no one could fail to be impressed with the caution exercised in the use of the forceps in obviously suitable cases. Take, for example, the first case, in which he makes his visit, gives his instructions for the night, and then proceeds: "When I called in the morning, I found the child's head advanced lower in the pelvis." He gives in detail his reasons for expecting further progress. He says, "Being called in the evening, and understanding that the pains were still weak and the gossips uneasy, I examined in time of a pain, and found the head was lower." He then describes in minute detail how he applied the forceps and extracted the first child in a twin pregnancy, and concludes: "I used the forceps in this case as a pair of artificial hands to assist the delivery, because the pains were too weak to expel the child." This case very well illustrates Smellie's practice, particularly the patient waiting for the natural efforts of delivery before interference. In another case he says, "The patient, though much recruited, being still weak and the pains languid, I directed the midwife to proceed in supporting her with the broth, and prescribed a cordial mixture without any opiate, to amuse the woman and her friends." In another case he was called to a patient who had been in labour for three days under the care of a midwife. "As soon as I was disengaged," he says, "I accompanied my pupil to the place where I found this loquacious midwife extremely ignorant, without the least tincture of knowledge in her possession. When called to the patient, whose pains were just beginning in this her first labour, she had

* Collection of Cases and Observaiions in Midwifery. 3 vols. London, 1764.

walked her about and fatigued her so much that she was quite exhausted and the pains had entirely ceased. The midwife complained that her fingers were swelled and painful with stretching the birth, but she did not know how long the waters had been discharged." Smellie gave directions with the object of obtaining some rest for the patient, and early the next morning delivered her with the forceps, "without lacerating her parts or even marking the child's head."

By way of illustration of the theory of the next generation in this period, I may quote from the "Practical Essays on the Management of Pregnancy and Labour," by Dr. John Clarke, published in London in 1793 : "Violence offered by the improper use of instruments may also become a cause of fever ; therefore they ought never to be employed in any case except where they are absolutely and indispensably necessary. He who uses them unnecessarily, and solely with the intention of saving his own time, has much to answer for, both to society and to his conscience."

If instead of accepting an opinion, we prefer to turn to a record of facts in order to draw our own conclusions, let us look into the "Practical Treatise on Midwifery," by Dr. Robert Collins, published in 1835. The author gives an account of 16,414 cases of labour in the Dublin Lying-in Hospital during his Mastership. The rules laid down by Collins for the use of the forceps sound very much like some contained in the most recent German literature on the same subject. He says, "In tedious labours, where the mouth of the womb is fully dilated, the soft parts relaxed, and the head so low in the pelvis as to bring the ear within reach of the finger, if there be a necessity for interference, the forceps may be used with advantage ; but ample experience has most fully proved to me, that under those circumstances, uterine action fails but seldom in expelling the child, and that it is only in cases as above described, where the *safety* of the patient *requires assistance*, that we are justified in using this instrument."

In 16,414 deliveries in the Hospital, he met with but fourteen cases answering this description; in eleven of which the forceps were used, and in three, the lever. In the other instances where the forceps was applied the labours were complex.

There are several other situations in which the forceps may be applied with much benefit, as in convulsions, hæmorrhages, etc., where the case is in other respects suited to their application; these are pointed out in the remarks on the treatment of such labours.

"The forceps was used during my mastership 24 times, and

the lever 3 times, total 27 ; making the average about 1 in 608 deliveries. According to this calculation, most physicians in private practice would require to use them but seldom, as, supposing an individual to attend 4,000 cases in the course of his life, which is a greater number than falls to the lot of most men, the forceps or lever would be necessary in little more than *six* cases. I consider the forceps, when used with prudence, a most valuable instrument; but its utility is greatly lessened by the injury so frequently inflicted on the patient, by having recourse to it where *no* instrument is *necessary :* but *much more so* by using it where, in my mind, it is not only inapplicable, but highly dangerous to the patient's safety."

But it may be objected to the frank acceptance of Collins' rules for our guidance at the present time, that the childbed mortality under such rules must have been very high. It was far otherwise. After giving an account of the measures adopted to banish or guard against puerperal fever, he says : "Of 10,785 patients delivered in the Hospital subsequent to this period only 58 died, which is nearly in the proportion of 1 in every 186 ; the lowest mortality, perhaps, on record in an equal number of a similar class of females." Another objection which naturally arises to what some might call procrastination in the management of labour is the high death rate among the children born under such circumstances ; but Collins supplies us with full and exact information on this subject, and the infant mortality is surprisingly small. He says : "The total number of children born was 16,654, of these 284 died previous to the mother leaving the hospital. This is nearly in the proportion of 1 in 58½, which must be considered a moderate mortality under any circumstances ; however, when it is considered that this included not only all the deaths that occurred in children born prematurely, and in twins, but also every instance where the heart even acted or where respiration ceased in a few seconds after birth, the proportion of deaths becomes *trifling* indeed. Of the 284 deaths, 100 were premature deliveries."

The Influence of the Introduction of Anæsthetics.—The introduction of anæsthetics into midwifery practice marks the opening of such an era that every modification of the obstetric art within the first period sinks into insignificance. Time permits me only to indicate, not to fully detail, the modifications of practice during that time. We find, for example, that Smellie was rather attracted by the use of the forceps, and then he and his pupils initiated a mode of practice which came dangerously near to abuse. The work of William Hunter, who published his "Anatomy of the Gravid Ute-

rus" in 1774, and founded physiological midwifery, produced some modification in the opposite direction, and the opinion brought about through his influence may be indicated by a quotation from his disciple Denman. "It has long been established, in this country, that the use of instruments of any kind ought not to be allowed in the practice of midwifery, from any motives of *eligibility*. . . . Whoever will give himself time to consider the possible mistakes and want of skill in younger practitioners, which I fear many of us recollect; the instances of presumption in those who, by experience, have acquired dexterity, and the accidents which under certain circumstances seem scarcely to be avoided, will be strongly impressed with a sense of the propriety of this rule."

This is also the position taken up by Collins, from whose work I have already quoted. There can be little doubt, however, that under these rules the interests of the mothers were not conserved. The practice was to delay too long during the second stage of labour, and this brought about those terrible injuries from sloughing, leading to the formation of fistulæ between the vagina and the bladder, and between the vagina and rectum, which produced such a frightful amount of suffering among women at the most vigorous and useful period of their lives. Collins speaks of using the midwifery forceps only once in 608 cases, but he gives concisely the facts of many cases of cruelly prolonged childbirth, of which the following are fairly typical examples:

No. 504. Was brought to hospital from the country; reported to have been five days in labour; it was her first child; it was dead and the head firmly fixed in the pelvis. She was much exhausted; pulse 110; tongue parched. "The head was immediately lessened," and delivery effected with the crotchet. She sank on the ninth day from admission.

No. 555. Was sixty hours in labour of her first child. The pelvis was defective, and there had been no advance for the last twelve hours, the child's death having been ascertained by the stethoscope some hours previous; the head was lessened and delivery thus completed.

No. 608. The labour pains were very tardy and feeble, producing irritation without causing any dilatation of the mouth of the womb. In this state she remained for thirty hours, after which opiates were given three times at considerable intervals, each time with benefit, and at the expiration of fifty-three hours she was delivered naturally of a still-born child.

We need not go abroad to seek the advice of the masters of the obstetric art during this period, and I need not further multiply

quotations. We shall find the great teachers always sound and clear in their utterances. I shall only refer to our own Ramsbotham who comes in with Sir James Y. Simpson at the end of the first period. His great work* made its appearance in 1841. He considers the application of the forceps such an important operation that he strongly recommends consultation, "even though a neighbouring, probably a rival, and perhaps not very friendly practitioner" may have to be called in. And he frequently exclaims: "Cautiously and tenderly must this iron instrument be used! . . . We must remember that one injudicious thrust, one forcible attempt at introduction, one violent effort in extraction, may bruise, may lacerate, may destroy."

The typical injury of parturition during this period was vesico-vaginal fistula, but there can be no doubt that the not infrequent use of perforating instruments and the crotchet produced bruises and lacerations which, in pre-antiseptic days, must have conduced considerably to the maternal mortality. The mistaken practice, also, of "stretching the birth," which I am afraid is by no means a thing of the past, was so prevalent that it must have done infinite injury. By causing minute necroses or lowering the vitality of the tissues it must have opened up the way to bacterial invasion with all its consequences.

Laceration of the perineum must have been occasionally inevitable in former generations as in our time. But special attention appears to have been given to its prevention. Denman indeed refers to its prevention as "the principal object of our attention in natural labours."

With the *second period* commencing with the discovery of anæsthetics, and ending with the general introduction of antiseptics, I have at present comparatively little concern. The obstetrician of that quarter of the century, of whom we may take as a type the late Dr. Mathews Duncan, was much concerned with the mechanism of labour, and this is the only period, if any exists, in the history of obstetrics when the warnings against meddlesome midwifery by the teachers ceased to be as clear and emphatic as they had been in former times. With the beginning of this period, we have the work of Marion Sims marking an epoch in the history of gynæcology. He and his contemporary imitators and his successors were long busy repairing the characteristic ancient injury of vesico-vaginal fistula, for they had the accumulated misery of a whole generation of women to cure or ameliorate. With the end of the period comes

* Principles and Practice of Obstetric Medicine and Surgery.

the introduction of Emmet's operation, which, according to Jenks, marks "one of the greatest advances in modern gynæcology," an opinion not even yet so generally held in England as it ought to be.

The introduction of anæsthesia did not lead to any great improvement in the practice of obstetrics; the medical practitioner could now relieve the patient from the worst pangs of parturition, and therefore could well afford to wait in normal labour for completion by the natural process. But it was soon found that the production of anæsthesia was not all gain. It was found that the prolonged administration of chloroform brought on inertia of the uterus, tedious labour and post-partum hæmorrhage. The tediousness of the labour made the "gossips uneasy," and the most conservative of practitioners was too often driven by the appeals and reproaches of the patient and her friends to the application of the forceps. In fact, the consciousness that the final pangs of labour and the acute suffering which would otherwise be produced by the application of the forceps could be entirely relieved by the administration of an anæsthetic had for its practical effect a great extension of operative midwifery. Lacerations of the perineum became much more frequent than under the old practice of delay, and as it was quite unusual to suture these lacerations as is now the universal practice, incontinence of urine, owing to vaginal sloughing, was replaced by incontinence of fæces resulting from complete laceration of the perineum. The lacerations of the cervix and vagina and their relation to parametritis were either unobserved or not understood until Emmet taught the medical world their importance. Just as the practice of the first period made material for the special beneficent work of Marion Sims, so the abuses of the second period provided the opportunities which Emmet had the genius to recognize and to use. He was the first to observe and describe the injury that had been inflicted, and to teach the gynæcologist the method by which it could be repaired.

Anæsthetics plus Antiseptics—The advent of the *third period*, that of anæsthetics combined with antiseptics, dates from 1870 to 1873, or somewhat later. About that time began those triumphs of abdominal and pelvic surgery applied to the diseases of women of which men of our special branches of medicine are so justly proud. The operations in general surgery also took on a new phase, and our students, accustomed to witness in the hospital the audacity with which the modern surgeon, depending upon anæsthetics and antiseptics, could deal with new growths and surgical injuries, were influenced, perhaps almost unconsciously, by what they

had seen of operative surgery towards applying its methods to midwifery practice. There has been little of precept and example to counteract this tendency. Our students in the medical schools are not taught obstetrics and gynæcology in a reasonably practical way-while on the other hand they apply themselves to surgery, theory and practice, from the time they pass the entrance examination until they graduate. They learn surgery which they will never practice, and they will practice midwifery which they have never learned.

But the mischief is not merely negative. If the young practitioner turns to some of our English manuals of midwifery, or to contributions to our medical journals, he is liable to be misled into practice which is actively harmful. It would be a long and invidious task to support this statement by references, but it may be as well to take one or two illustrations. A friend of mine has published a "Practice of Midwifery" as a guide for practitioners and students. The edition from which I quote is dated 1896. He says: "The perverted old adage that 'meddlesome midwifery is bad' has long stood in the way of an early application of the forceps in uterine inertia . . . . Rash and inconsiderate measures I would not be thought to encourage. . . . but we must not let our caution warp our judgment and so delay a comparatively simple and harm, less operation until it becomes one that is difficult and dangerous." On the rest of his chapter on the forceps I have no relevant criticism to make, except that it is too much like the summing up of a judge to a jury to afford a clear, definite and helpful guidance to the student; but in this respect it is by no means an exception among the manuals.

I have already quoted a master of the Rotunda Hospital of Dublin, and I should like to refer for a moment to a phase of midwifery practice initiated, or largely influenced in its development, by another. Dr. Johnston * published an account of the use of the forceps at the Rotunda Hospital in Dublin during the year 1875. He says: "There were 113 cases where we considered it advisable to deliver with the forceps, and 83 of these were primiparæ, . . . 75 mothers recovered, 8 died, 6 being cases of seduction, fretting; 2 cases of peritonitis. Thirty were pluriparæ; 26 mothers recovered, 2 died." There were 1,025 cases, and the forceps were used in 11 per cent. The maternal mortality is 10 per cent. in the forceps cases. Death in child-bed from "fretting" appears to be a specialty of the Dublin medical school. They have not anything

* "Medical Press and Circular," January, 1876.

of the kind in Germany, and Fritsch, in his book on puerperal fever, in referring to the Dublin peculiarity, calls it "dummheit." Dr. Johnston goes on to meet the objection that the forceps is a dangerous instrument, and he says: "As a proof to the contrary I may mention that of the 752 cases that have been delivered within the last seven years, in no one instance was injury inflicted by the instruments on the soft parts of the mother." We shall see again how the best practice in the German lying-in hospitals contrasts with this wonderful result. There they have not three times as many deaths from fretting as from peritonitis, but they confess to inflicting much injury on the soft parts by the use of the forceps. After the usual formal caution against rash interference, Dr. Johnston goes on to say: "The more we see of early interference and the benefits arising from it the more we are induced to persevere in it." He says little about his mortality, which was about double that of ovariotomy in experienced hands. His argument that this operation should not be undertaken by an "unskillful person," introducing a comparison between applying the forceps and tying the subclavian artery or lithotomy, amounts to a plea for leaving operative midwifery entirely in the hands of a special class.

Facilis descensus averni. We soon find even such an experienced and cautious obstetrician as Dr. Swayne,* of Bristol, referring to Dr. Johnston's hospital reports, and expressing approval of the practice of using the forceps during the first stage of labour. Dr. Swayne quotes Denman's aphorism, "The first stage of labour must be perfectly finished before we think of applying forceps," and he declares with evident satisfaction that in no branch of obstetrics have we departed from the precepts and practice of our forefathers as in this.

Further examples might be quoted by the score. The deterioration went on rapidly, until many teachers and writers of manuals seemed to have hardly the courage to speak with clearness and precision, and they talked and wrote as if they had no decided opinion of their own. Their formal cautions and restrictions, more or less explicitly stated to be applicable to the practice of the experienced and skillful, are a mere sham as applied to the untaught young practitioner, and they become a delusion and a snare.

It is only about twenty years since Dr. Swayne referred to the use of forceps in the first stage of labour as a "startling innovation" in obstetric practice; and the midwifery practice of to-day, especially among the working-classes in England, is something to wonder at and deplore. The young practitioner sees a woman suffering

* "British Medical Journal," April, 1877.

under the pangs of labour; he can relieve these by anæsthetics; normal labour is a process which requires time; the practitioner does not like waiting, and he has appliances by which he can abridge the process of normal labour; he knows he may produce injuries, but these are in his eyes trifling compared with the injuries he has been accustomed to see treated successfully by the surgeon with the aid of antiseptic appliances, and a laceration can always be sutured if it appears to be of sufficient importance. Why, therefore, should he permit suffering to his patient and waste his own time? He does not know enough of gynæcological practice to be impressed with the importance of a laceration of the cervix or vagina or a dislocation of the uterus; that is to say, of the remoter consequences of his well-meant interference. More than that, although he may have attended the statutory number of labours required by his college or university, he has enjoyed few advantages of direct practical instruction and example; he may be unable to diagnose the presentation, so he must trust to force alone; he has seen little or nothing of the puerperal state, so he is hardly in a position to appreciate the risk to his patient or to recognize some of even the immediate effects of operative midwifery.

Meddlesome Midwifery.—I have endeavoured to trace the course of change in obstetric practice in England, and to indicate the causes. That practice is now, in my estimation, vastly too meddlesome and mischievous, and some reform is urgently required. Probably few men even in the medical profession who do not actually see midwifery practice among the working classes of our large towns, or have their attention constantly drawn to the injuries resulting from their practice, are aware of the actual state of affairs. In Manchester, and the manufacturing towns of Lancashire, the proportion of cases in which the forceps are applied, with or without indications, amounts to five and twenty or thirty per cent. and even more. One of my friends who has a large general practice within the area covered by our Maternity Hospital has been good enough to give me a statement of his midwifery practice for the last ten years, and the proportion comes as nearly as possible to twenty-five per cent. From 1885 to 1889, five years, he attended 839 cases, and applied the forceps in 142, that is, in 17 per cent. From 1890 to 1896, seven years, he attended 900 cases and used the forceps in 246, that is a percentage of 27.3. His rate of forceps delivery is highest in 1896, when he used the instrument 50 times in 150 cases. Another friend, whose practice mostly lies within the same area, tells me that his proportion is at least thirty per cent. The highest figure mentioned to me has been 75 per cent. A busy

practitioner whose field of operations lies in one of the largest manufacturing towns in Lancashire, told me, in answer to the question which I so frequently put, "What is the percentage of forceps cases in your practice?" that his was "At least seventy-five per cent." "But," I replied, "you must be joking." "Not at all," he said, "between high and low applications of the forceps, at least seventy-five per cent." "But," I said, "surely you have no appreciable number of cases of application of the forceps at the brim?" "I had three cases only last week, but it is a good while since I had such a case before," and, to prove to me that his seventy-five percentage was a fact and within the mark, he promised to give me the exact figures from the record of his cases.

I have been frequently told by practitioners in similar communities that in the case of a multipara they allow half an hour to an hour for the second stage of labour, and, if the case does not show signs of immediate spontaneous completion, they apply the forceps. Among the gynæcological cases at the Manchester Southern Hospital it is by no means a rare thing to find a young woman suffering from dislocation of the uterus and lacerations of the cervix and of the perineum, whose first labour was terminated by forceps within four to six hours of the onset of regular pains.

Now, before passing judgment on this kind of practice as to whether it is reasonable or unavoidable, or praiseworthy, or the reverse of all that, we must find a criterion of good practice. What means have we of forming an opinion as to the proportion of cases in which we may have to interfere *under proper indications;* that is to say, when symptoms indicate some danger to the mother, to the child, or to both. We must obviously compare the methods of treatment adopted and the results obtained over large numbers of recorded cases. For my present purpose I naturally put before you in the first place facts with which I am conversant and can establish beyond dispute. I have here figures showing the details of two years of the practice of the Manchester Maternity Hospital. The hospital contains only twelve beds for in-patients. The home-patients who form the great majority are attended by more or less trained and experienced midwives. The midwives have instructions in case of difficulty to send for the assistance of a district obstetric physician, who lives within the area for which she is responsible.

MANCHESTER MATERNITY HOSPITAL.

From October 1st, 1894, to September 30th, 1895.

In-Patients—

Total number confined in hospital	183
" " delivered with forceps	12

Out-Patients—

Total number attended 1102
District obstetric physicians sent for by midwives, forceps cases. 15

Doctor called in by midwife on account of—

Adherent, or retained placenta	4	cases.
Breech presentation	1	"
Transverse presentation	1	"
Placenta prævia	1	"

From October 1st, 1895, to September 30th, 1896.

In-Patients—

Total number confined in hospital 177
" " delivered with forceps 21

Out-Patients—

Total number attended to 947
" " forceps cases 14

In the home-patient department, in addition to the fourteen forceps cases, the doctor was called in three times to twin cases (second twin tranverse). Abortion 1. Retained placenta 2. Post-partum hæmorrhage 1, and shoulder presentation 1. Placenta prævia 1.

Only simple forceps cases are set down in this statement; the few in which forceps were applied after version are not included.

It will be seen from these figures that the forceps deliveries among in-patients are in a comparatively high proportion, but it must be explained that the hospital beds are understood to be retained for cases of difficulty and danger ; hence a large proportion of the women admitted have a history of difficult or operative labour in the past. The proportion of forceps deliveries among these in-patients is almost exactly nine per cent., and no woman died after the use of the forceps. The proportion of forceps deliveries among the home-patients in the charge of the midwives may be considered the normal requirements in such a community as ours. The midwives are under strict supervision. Their credit is at stake if they lose their heads and send too frequently for medical assistance, and their position is in danger if harm comes to the mother or child by want of knowledge and judgment in failing to send when necessity arises. Now, in 2049 home-patient deliveries, the forceps had to be applied by the obstetric physicians 29 times ; that is, as nearly as possible, 1.4 per cent. I have already called your attention to the fact that within the same area of population, but among the class of people who can afford to pay for private medical attendance, the proportion of forceps deliveries is from five and twenty to thirty per cent. Such a striking contrast surely supplies food for reflection and calls for explanation. Another point, which I mention with some diffidence because I have only my own figures to offer by way of illustration, is the remarkable difference in the proportion of forceps deliveries among the poor

as compared with those in a better position in life. I have for a long time made cautious inquiries with regard to the history of the confinements in taking notes of my private gynæcological cases, and my conclusion is that the hospital patients are delivered with forceps more than ten times as often as the class of women who consult the gynæcologist privately, and may therefore be assumed to be in a position to pay higher fees to the accoucheur. If this result should be found on extended enquiry to coincide with the experiences of others in a similiar position, it is a not unimportant fact in guiding our judgment to a conclusion as to how far we may have drifted astray from right and reasonable midwifery practice at the present time, and as to one cause at least of the aberration.

My attention was first attracted to this subject about twelve years ago, and I have given it some attention ever since. I was then assisting an experienced accoucheur in a case of normal labour in a primipara. As far I could judge, nothing could be more typically normal than the labour up to the point of what appeared the approaching completion of the second stage, and yet I was asked to assist in an obstetric operation by administering an anæsthetic, although my senior had made previously some joke about the "healthy young animal" type of the pains, and they as far as I could see had not changed from that type. He applied the forceps, and by repeated efforts at traction effected delivery, lacerating the vagina and perineum. The immediate results were those we are familiar with, includlng an attack of parametritis; the remoter effects were prominent cicatrix of the vagina, and chronic bad health. I am reminded of the history from time to time by being consulted by the patient.

My enquiries into the need for such operations and their consequences have gone on intermittently ever since, and I have noted with great satisfaction the rising protest in Germany against the abuse of the forceps.

There is now a considerable literature on the subject of forceps deliveries. There is not time, nor is this quite the occasion for going into many details on the subject. I may, however, make some concise reference to certain facts recorded in this literature, as I consider it of the greatest possible value to those who may wish to form an independent judgment on the matter, on account of the large amount of material and the exactness with which the whole matter is put before the reader. In 1889 Munchmeyer* published a valuable article in which he gave an account of the cases of labour completed with forceps in the Royal Hospital for Women in

* "Archiv fur Gynakologie," Vol. 36.

Dresden from 1883 to 1888, and the last of this series of papers which I have seen is that by Dr. Béla von Walla, which he calls "Studien im Auschlurs an 115 Zangen operationen." It appears in the fifth volume of the *Monastschrift fur Geburtshülfe und Gynæcologie.* It is an account of the cases delivered with forceps in the University Klinik for Obstetrics and Gynæcology at Buda-Pest. From the 1st September, 1882, to December 31st, 1895, there were 11,064 women confined in this hospital. Of these labours 115 were completed with forceps, that is, in the proportion of 1.04 per cent. over the whole time, and in 1895 the percentage of forceps operations sank to 0.32. It is instructive to compare with this the frequency with which forceps operations are performed in other German University kliniks, and also to compare the most extreme cases with our own general practice. Wahl, in his paper, continuing the report of the Dresden Hospital begun by Munchmeyer, gives an interesting table, showing the relative frequency with which the forceps have been used at various maternity hospitals:—

Kézmarszky, Buda-Pest, 1874-1882	1.4 per cent.
Abegg, Danzig, 1872-1885	2.2 "
von Winckel, Munchen, 1884-1890	2.6 "
Leopold, Dresden, 1889-1894	2.56 "
Gusserow, Berlin (Charité), 1882-1886	2.66 "
Leopold, Dresden, 1883-1888	2.6 "
von Winckel, Dresden, 1879-1883	3. "
Ahlfeld, Marburg, 1881-1888	3.5 "
von Rosthorn, Prag, 1891-1894	3.63 "
Stuttgarter Geb. Austalt, 1872-1885	3.7 "
Braun, Wien	4.3 "
Kehrer, Heidelberg	4.6 "
Olshausen, Berlin	4.96 "
Fehling, Basel, 1887 1893	5.33 "
Sutugin	6. "
von Saxinger, Tubingen	6.5 "
Olshausen, Halle	8.4 "
Schauta, Innsbruck, 1881-1887	9.16 "
Schultze, Jena	11.6 "

As Wahl points out in the contribution from which I am now quoting, the great difference in these figures indicates a marked difference of opinion as to what are the indications for the use of the forceps. In Buda-Pest and in Dresden, the indications for the forceps are very strictly and narrowly defined, whatever may be the rule at other institutions. At some of the medical school hospitals it is unfortunately thought right to apply the forceps in cases of normal labour in order to give instruction to the students.

This is an excellent account of the forceps treatment of labour in the Dresden Hospital, which is given by Wahl.* It is, as already

* Uber die entbindungen mit der Zange an der Königh, 1894. Frauenklinik in Dresden in den Jahren 1889, bis 1, Januar, 1896. Archiv fur Gynacologie, Bd. 50.

mentioned, in continuation and supplement of Munchmeyer's report six years before, and deals with the cases delivered within the hospital from 1889 to the end of 1894—six years. The whole number of cases was 9,061 ; forceps were used in 232 cases, that is, in 2.5 per cent. An examination of the details gives some extremely interesting information, which, however, is not altogether relevant to the present purpose. The forceps were used only on certain exact conditions and indications. The cervix must be completely dilated, the membranes ruptured, and the sagital suture as nearly as possible in the antero-posterior diameter of the pelvic outlet. There were 212 or 91.5 per cent. of typical cases for the application of the forceps ; there were only 17 cases in the whole 9,000 in which the forceps were applied, while the head was at the pelvic brim. The final indication for resorting to forceps was always danger to the mother, to the child, or to both, and three to four hours was the period allowed for the second stage of labour. At Buda-Pest the time allowed for the second stage was five to six hours.

Remarkably interesting, too, is the information contained in this report regarding the morbidity and the mortality of both mothers and children. The results for both are as good as any ever published. The only point, however, to which I wish specially to call attention is the number and extent of the lacerations and injuries which are attributed to the forceps under conditions in which observations could be exactly made. Munchmeyer reports 85 per cent. of lacerations, including in this episiotomy performed by himself to prevent worse lacerations, and those small injuries which could be repaired with a single suture. Schmidt found 84.6 per cent. of lacerations of the vagina and perineum, two of the latter complete in 132 forceps operations at the Klinik of Basel. The latest results at Dresden, as given by Wahl, appear to be somewhat better. In 232 cases the percentage of injuries was 81.4 per cent. These included injuries to the vagina, to the cervix and to the perineum, some of which were slight, others extremely severe. There were lacerations of the cervix which required immediate suturing to stop the hæmorrhage, and there were six complete lacerations of the perineum. *Only* 18 *per cent. of the cases were injured.* Munchmeyer may well refer to the application of the forceps as the bloodiest operation in medical practice, and Wahl quotes with approval the opinion of Von Winkel, that, even in the hands of an experienced operator, the forceps is an instrument by no means devoid of danger. Compare these results of cautious forceps delivery with Dr. George Johnston's who had 752 forceps cases " without once injuring the soft parts," and yet he applied the forceps in the first stage.

It would be tedious and serve no good purpose to go on multiplying experiences. All that we see and all that we read seems to point to the fact that we have replaced the one great injury of parturition of former generations—vesico-vaginal fistula, by a host of others, vesico-vaginal fistula by laceration instead of by sloughing included. There is a general impression that sloughing was very common in former generations owing to long-continued pressure. It is extremely difficult to get any information on the relative frequency. I have gone through the 700 cases which form the material of Mauriceau's work, and have found only six cases in which incontinence of urine resulted from tedious labour. The utero-vesico-vaginal fistulæ which we have to deal with are not extremely rare, and these are invariably produced by premature application of the midwifery forceps in primiparæ. There can be no question that many other such fistulæ are produced, but we never see them, because the patients die in child-bed. In addition to the lacerations and disablement which comes from them as lacerations, there are numerous other acute and subacute troubles, such as parametritis and cicatrisation. When we see such injuries with attendant displacements so frequently produced, when we think of the extreme differences in the practice prevailing in one country and another, or among one class of society or another, is it not reasonable to conclude that there must be something seriously wrong with our theories or our practices, or with both?

My present purpose is not so much to attempt to prove anything to demonstration, as to call attention to certain obvious evils, and by a plain statement of facts to establish a *prima facie* case for closer investigation of the question:

> "That from Discussion's lip may fall
> The law which working strongly binds."

I may, however, without irrelevance, remark now that I have myself a firm conviction that serious evils exist; that a vast amount of unnecessary misery is produced, and that it should not surpass the wit of man to find a remedy. I am quite aware of the difficulties that meet the individual practitioner. I have been too long a general practitioner, before specialising, to have missed my share of those experiences, and perhaps it may raise a smile if I say, from that point of view, "that the gossips being uneasy," in the language of Smellie, is one of the real difficulties in the way of reform, if by "gossips" we mean those interested in the patient who may have some sort of right to ask questions or claim the privilege of offering well-meant but ignorant suggestions, concerning the "exhausted" condition of some vigorous young woman in the first

hours of a normal labour. It is only the formation of a strong professional opinion and then a public opinion that will enable the individual practitioner to hold on to the proper course without ruinous injury to his professional position and character. But I believe that just as twenty years ago we met with men who feared to suture a spontaneously lacerated perineum, lest they should be blamed for producing the injury, and now among their successors meet with few who would not fear to be blamed if they did not suture such a lacerated perineum ; so the same process of formation of opinion by the practice of men of clear views and strong will with regard to the forceps would bring about a similar reform.

Among the causes which give rise to the present abuses must be put in a high place our over-confidence in antiseptics. Too many of our practitioners think that they can do anything in the way of manipulation, digital or instrumental, if only they use some chemical solution with sufficient copiousness. This, I am afraid, is a fatal delusion. Such at least is the conclusion I am compelled to draw from my own experience of cases of puerperal fever seen in consultation. It is a pathetic and humiliating sight to see a healthy young woman dying in childbed, with her little wedding presents as yet untarnished around her, *because* the medical attendant has thought it right to risk the production of injuries in a first and normal labour under the mistaken impression that he can prevent bacterial invasion by means of some weak solution of permanganate of potash and mercury or other chemical which he calls an antiseptic. I believe in antiseptics certainly, but my faith does not carry me to the extreme point of the schoolboy's definition as to the faculty of believing what we know cannot be true.

But the great difficulty in the way of either prevention or reform of abuses is the want of systematic practical instruction in our Maternity Hospitals, the absence of the precept and example of the best available men at the bedside. The consequence is that our young medical practitioners at the commencement of their careers have to learn midwifery by a process which amounts to involuntary experiment upon their patients. While the German medical student learns midwifery and gynæcology as he learns surgery, and the subject ranks with medicine and surgery in the examinations, we are still content to insist as far as practical instruction in obstetrics is concerned merely upon a formal compliance with certain regulations which do not necessarily imply practical knowledge worthy of the name.

The solution of the problem before us must sooner or later be attempted ; that problem is : " How are we to proceed in order to

reconcile the avoidance of injuries to our patients which may carry important consequence to life and health in their train, with the use of the scientific resources of our generation which should enable us, under proper safeguards, to soothe and curtail the mental and physical suffering which at the best are inherent in the process of parturition ? "

You have heard what I have to say. I do not assume the position of guide or philosopher ; I take the advantage of the opportunity you offer me to call the attention of the profession to what I believe to be a crying evil. If you, the professors of the science of obstetrics and gynæcology, believe the evil exists, you will find the remedy.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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LUMBAR PUNCTURE.

Fleischmann (*Deutsche Zeits. fur Nerv.*, July, 1897, Medicine) reports on the lumbar puncture of fifty-four patients in the service of Lichtheim at Koenigsberg. He agrees with nearly all others that the procedure is without serious therapeutic value. Even in so-called serous meningitis only one of the four cases upon which it was practised showed any good results from the operation. In accord with previous observers, however, is the conclusion that the technique is simple and facile, and the few unpleasant results of no serious import and not to be regarded as a contraindication. Together with most other investigators of the subject, he lays most stress on the diagnostic importance of the abstracted fluid.

Puncture was done fifteen times in twelve cases of tubercular meningitis, and the bacilli were found nine times in eight patients ; while of five punctures in two cases of epidemic cerebro-spinal meningitis only one yielded the Weichselbaum coccus.

Four cases of purulent meningitis are recorded. Pus corpuscles and streptococci were found in the fluid of two, streptococci without pus in one, and many white blood-

corpuscles without micro-organisms in the fourth—that is, a positive finding, more or less conclusive, in all.

In studying this, as indeed all other reports on this subject the thought is inevitable that even when lumbar puncture is an undoubted diagnostic aid, the information thus obtained, considering the present status of therapeutics, is not of great practical value. As between tubercular meningitis and purulent meningitis, or as between the former and brain tumor, or even as between tubercular meningitis and serous meningitis, it must be acknowledged that a positive diagnosis is really of no very great value in directing the treatment or affecting the result of the disease.

Of the cases reported in detail we may mention three of serous meningitis, as the disease is not very well known, and the cases illustrate some of the difficulties of diagnosis by means of lumbar puncture.

A young woman of 24 years was taken suddenly ill with violent headache, nausea, and vomiting. There were soon added attacks of general convulsions with loss of consciousness and moderate cervical pain. Seven days after the onset examination showed elevation of temperature, a dicrotic pulse of 44, pain on bending the head forward, and double optic neuritis. The following day the patient vomited several times and had a general convulsion lasting about two hours. Afterward she was quite rational and without fever. The next day there was removed by lumbar puncture twenty-five cubic centimeters of fluid which contained one part per thousand of albumen, and in which a slight coagulum formed spontaneously. No immediate good effects of the puncture were discernible, but the patient gradually improved, and four weeks after the beginning of her illness was completely well, the persisting optic neuritis (which also rapidly improved) being the only sign of disease. The percentage of albumen in the fluid as well as the spontaneous formation of coagulum pointed to an inflammatory affection. As the patient belonged to a tuberculous family and had herself suffered from scrofula and bone tuberculosis, tubercular meningitis was suspected, but examination of the fluid for tubercle bacilli was negative, and purulent meningitis was excluded on account of the low percentage of albumen, the absence of pus corpuscles, and micro-organisms. The rapid recovery of the patient was considered to verify the diagnosis of serous meningitis.

The second patient, a sailor aged 22, who had also had tuberculous osteitis, was taken with headache, nausea, vomiting, cervical rigidity, and sleeplessness. The pulse was only 36. After a couple of weeks he improved rapidly, but four

weeks after the beginning of the trouble the same symptoms returned, with a pulse of 48 and double optic neuritis. Three months later lumbar puncture was made and fluid removed which contained only three-tenths of one part of albumen per 1000, and did not coagulate. After four weeks a second puncture drew fluid of the same character. There was no perceptible effect from the operation, but the patient improved and was discharged cured four months from the first onset of his sickness. In this case the small amount of albumen in the fluid and its failure to show coagulation indicated a non-inflammatory affection, and yet the coures and termination of the disease seemed to prove it a serous meningitis.

In the third case autopsy confirmed the diagnosis. A child of three years who had had eclampsia at ten days suddenly became ill with fever, headache, vomiting, loss of consciousness, and rigidity of the entire body, but remained sick only a short time Three weeks later she had a fit with loss of consciousness, clonic spasm, followed by loss of speech and paralysis. On admission there were rigidity of the spine, impaired consciousness, rotatory movements of the head, continual grinding of teeth, slight paresis of the right side, and double optic neuritis. During the period of observation the pulse remained high, the temperature occasionally high but generally normal. The spinal canal was punctured twice, the fluid containing only a trace of albumen and developing no cloudiness. Three weeks after admission the child developed pneumonia, which was quickly fatal. The autopsy revealed internal hydrocephalus, spinal meningitis, catarrhal pneumonia, and swelling of the intestinal follicles. This case, as well as others, goes to show that the serous meningitis of Quincke is probably not a perfect entity, but that approximately the same symptom-complex may be developed by a variety of conditions. It will also be noted that the qualities of the fluid indicating inflammation—viz., large proportion of albumen and spontaneous coagulation—were wanting, although distinct inflammation was present.

In another case in which the diagnosis lay between tumor and abscess, the high pressure—equal to forty-five millimeters of mercury—decided the observer in favor of tumor—a conclusion shown to be correct by operation and autopsy.

Another interesting case was that of a boy of eight who became rapidly sick with all the principal symptoms of meningitis, but a few days later the condition seemed somewhat anomalous, and a lumbar puncture was made for diag-

nostic purposes. The fluid was clear, contained only a trace of albumen, and showed no sign of cloudiness on standing; hence an inflammatory affection of the [cerebro-spinal meninges was excluded. This being done, typhoid fever seemed the most probable disease, and the serum test being used gave a positive result—the correctness of which was fully confirmed by the subsequent course of the case as well as by the diazo-test of the urine.

CHOKED DISC AND BRAIN TUMOR.

Jacobson (*Centralblatt fur Nervenh. und Psychiat.*, June, 1897, Medicine) reports a case of cerebral tumor somewhat unusual in several respects. The patient, a child of five, while confined to the bed with a series of acute diseases gradually developed spastic weakness of the left side with some anesthesia. This paresis continued to increase after the patient was out of bed and constituted the only symptom, except moderately choked discs and toward the last a few attacks of faintness without loss of consciousness. The choked discs completely disappeared and did not return, and because of this and the inconspicuous general symptoms the author was inclined to diagnose a focus of cerebral softening rather than tumor. The autopsy revealed a tumor about the size of the thumb in the left cerebellar hemisphere, and another as large as a small apple in the right cerebrum that destroyed the entire lenticular nucleus, most of the posterior limb of the internal capsule, and part of the optic thalamus. Both were solitary tubercles. Jacobson explains the absence of severe general disturbance, as well as spontaneous disappearance of the choked discs, by the fact that the bones of the cranial vault had become very thin and elastic, allowing them to bulge, thus in some degree preventing great increase of intracranial pressure. He does not consider, however, that the disappearance of choked disc from relief of pressure is absolutely conclusive proof of the mechanical (pressure), as opposed to the toxic, cause of this condition, as an operation relieving pressure may be conceived to allow of the re-establishment of a natural circulation in the lymph channels, which permits removal of the toxic agents that presumably cause the optic neuritis.

In the discussion Oppenheim confirmed the disappearance of the choked discs in the present case in spite of the continued growth of the tumor, and was inclined to favor the mechanical origin of optic neuritis.

Schuster also reported the disappearance of choked disc in a tumor case. A young woman who presented all the

principal symptoms of tumor was put on inunctions of mercury and large doses of potassium iodide, whereupon the headaches ceased and the choked disc disappeared. Some months later she suddenly died, and the autopsy revealed in the left posterior fossa a glioma the size of a hen's egg, which showed no trace of any action of the iodide.

Greeff thought that clinically as well as pathologically a difference should be made between pure choked disc (passive congest ion) and optic neuritis. The latter means severe change in the nerve fibres; the former may exist to a marked degree without damage to the optic nerve and with normal vision and visual fields.

A REVIEW OF THE LITERATURE OF KOCH'S TUBERCULIN.

The *International Medical Magazine* for December, 1897, contains this article by J. Dutton Steele, M.D., Philadelphia. A brief résumé is given of the experience of those who have used tuberculin R since its discovery some eight months ago. E. Buchner employed the method of pulverization of the bacilli, an account of which was published in 1893. He ground them in the moist state with sand. The dose of the material diluted with glycerine or salt solution to the proper strength is from 1-500 of a milligramme to 20 milligrammes, the maximum dose being seldom reached. The initial dose of 1-500 milligramme is doubled every second or third day, or by slow degrees of increase if too much reaction is produced. The cure is finished when 20 milligramme doses have been reached, which occurs in from sixty-five to seventy days. After this the patient will not react to ordinary tuberculin. Various micro-organisms have been found contaminating the specimens of tuberculin R, and some have contained live tubercle bacilli, and samples vary in their potency. Considerable local irritation, sometimes abscesses, follow the hypodermic injections. Fever and nervous disturbances follow, and isolated cases of albuminuria are reported. A résumé of the reports on its use is thus given, and the following conclusions are drawn :

1. The new preparation if uncontaminated does not seem to be more harmful than the old tuberculin if very carefully given. The dosage suggested by Koch is probably too severe. Much is left to be desired in the preparation of the material. In its present form it is usually contaminated. The greatest element of danger is the possibility of the presence of living tubercle bacilli. It may also contain streptococci, diplococci, staphylococci, and various saprophytic bacteria.

Certain outputs of the substance are clearly stronger than others and more likely to cause serious reaction.

2. The injections are accompanied by much disconfort to the individual. The point of entrance of the needle usually becomes the seat of considerable inflammatory reaction and occasionally of abscess formation. Much of this may be accounted for by the contamination of the preparation or faulty asepsis in its administration ; but, even in the absence of the former and with extreme care in the latter, as in the series reported by Bussenius, some infiltration may occur. Very marked systemic reaction occurred in some part of the course of injection, but there is a reasonable suspicion that this may be caused by the apparent variation in strength of the preparation. It is possible that, if this uncertainty is overcome, immunity against the products of the microbe may be reached without undue reaction.

3. The immediate effects of the preparation upon existing lesions of the lung, larynx, bladder, and middle ear are too indefinite to admit of any certain opinion being formed concerning them. In lupus, in various suppurating tracts, and in one noticeable case of tuberculosis of the uterus and its appendages, the remedy seemed to be of value ; but whether of greater worth than the old tuberculin can only be determined by longer observations.

4. Koch's experiments upon guinea-pigs apparently established the fact that in them an immunity against both the bacteria and their products could be obtained, and, inasmuch as several patients after completing the course of injections stipulated by Koch received large doses of the old tuberculin without reaction, it would seem as if an immunity against the products of the bacilli could be produced in man. Whether such individuals possess also an immunity against the bacteria themselves, and therefore are protected against reinfection, must be settled by observations extending over a longer period of time. The observation of Baudach in this connection is pertinent: "The question of the production of immunity is unsettled. If there is none produced, then the only point of difference between tuberculin R and the old tuberculin is the greater toxicity of the former." The class of cases in which the use of the remedy is justifiable is naturally very limited.

STREPTOCOCCUS SERUM (MARMOREK) AND STREPTOCOCCUS TOXIN.

By FERDINAND SCHENK, M D.

The following experiments were undertaken as a continuation of the work of Borneman published in the same

journal in 1896. Four horses were immunized, all with the streptococcus Marmorek; all of them reacted strongly to the injections at first, but subsequently seemed to suffer no bad effect from active virulent cultures. All had previously been rendered immune to diphtheria. The streptococci were the same as those that had been supplied to Borneman by Marmorek himself, their virulence having been maintained by successive passage through rabbits. Altogether sixty preventive experiments were made with various quantities of the serum-test obtained from these horses, reaching from 0.2 c. c. to 5 c. c., and the animals were subsequently inoculated with from 0.01 to 0.001 of a c. c. of virulent culture. Of these animals twenty-three survived—that is to say, 36.6 per cent. Those that died had an average existence slightly longer than that of the control animals. Of the latter 11.4 per cent. only survived. Twenty-one animals were tested regarding the curative powers of the serum, as much as 10 c. c. having been given twenty-four hours after the injection of 0.001 c. c. Of these only two survived. Rabbits were taken and streptococcus culture injected into the ear, to develop erysipelas. In spite of the preliminary injection of antitoxin, control animals reacted quite as well as those that had been protected. When more virulent serum was used, the animals died quite as promptly as the control animals. In six animals the serum was employed after the development of erysipelas; one survived and the others died of streptococcus infection. Having reached the conclusion that the antistreptococcus serum was of no value, Schenk undertook to find out whether the streptococcus really produced toxin or not. He at first endeavored to kill the micro-organisms by means of mixing carbolic acid with infusions of the spleen and liver. Injections of this, however, caused death by carbolic-acid poisoning. An attempt to sterilize the cultures by heat (56°) rendered them innocuous. He then filtered cultures of streptococcus, and found that the filtrate was virulent, causing death within a few hours, but not giving rise to the typical picture of the streptococcic death, and it was not possible to cultivate streptococci from the blood or organs. This proved conclusively that toxins must be present in the culture, and, as a matter of fact, he was able to precipitate them with solution of chloride of zinc without altering their virulence. It appears that when animals have been preliminarily treated with streptococci serum the mitro-organisms, although they produce death, show considerable diminution of their virulence. Schenk appears to ascribe this, to some extent at least, to the protective action of the serum, although in general he agrees with Petruschky in denying it any real

curative or preventive value.— *Wien. klin. Woch.*, October 28, 1897. *International Medical Magazine.*

HYPNOTIC CREED.

The *Hypnotic Magazine* promulgates the following articles of belief, invites opinions, and announces that any proposition proven unsound will be stricken out:

1. The subject, or hypnotized person, is always responsible for his actions.

2. The subject's moral resistance is as strong in the hypnotic as in the waking state.

3. The subject will not accept a suggestion, or a post-hypnotic suggestion, which conflicts with his principles or his all-potent instinct of self-preservation.

4. The subject submits to be hypnotized; he cannot be influenced against his will.

5. The subject can break the hypnotic sleep and return to his normal state of consciousness, even in defiance of the operator's suggestion.

6. The subject is never unconscious; the subjective mind is always on the alert.

7. The suggestions which can be made to take root most readily in the subjective mind, are those which are to the therapeutic advantage of the subject.

8. Suggested sense delusions are accepted by the subject with the sub-conscious understanding that they are produced merely for the purpose of experiment.

9. A subject of good moral character cannot be induced by hypnotic suggestion to perform an act which he would consider immoral or even undignified in his waking state.

10. A subject of loose morals will exhibit the same characteristics in the hypnotic state, but will refuse to commit a crime which endangers his person (see "instinct of self-preservation," No. 3).

11. A crime committed through post-hypnotic suggestion by a subject (if such a thing were possible) would be assuredly bungled, since the carrying out of a complicated post-hypnotic suggestion entails a return to the state of active somnambulism, in which state inductive reasoning is impossible.

12. The assent of the subject is always necessary to the carrying out of every suggestion.

13. Auto-suggestion is more powerful than the suggestions of another.

14. The only harm which can result to a subject lies in the possible ill results of foolish tests which the subject is willing to carry out.

SURGERY.

IN CHARGE OF

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CHRONIC CONTRACTION OF THE FIBRES ENCIRCLING THE VESICAL NECK AND ITS TREATMENT.

In the *American Journal of the Medical Sciences* for Oct., '97, Dr. Fuller describes a chronic contraction of the prostatic fibres encircling the vesical neck which he regards as a pathological condition resulting from a continued functional contraction due to some settled disorder of the sexual apparatus, the rectum, the kidney, or other part. The leading symptoms, of gradual development, is a partial or complete inability to void urine. At first there is a hesitancy in starting the stream, and dribbling follows with inability to completely empty the bladder. The symptoms, at first intermittent, become permanent, and are followed by complete retention. Three or four years may elapse before continued catherization is necessary.

The diagnosis is made largely on the clinical history of the case and by excluding other causes of retention, as organic stricture, enlarged prostate, or spinal disease and resulting vesical atony. To diagnose between muscular contraction of the neck due to existing irritation, and chronic contraction, remove any exciting cause of the former, such as seminal vesiculitis, pyelitis, or rectal disease, if possible, and note the result. The only absolute diagnosis, however, is the feeling to the finger-tips of the ring of hardened fibres on making a perineal boutonniere incision.

The author cites several cases, each with an interesting history, in proof of his observations, and concludes his remarks as follows :—

"The only treatment for chronic contraction of the prostatic fibres encircling the vesical neck which in my experience has shown any favorable results consists in thoroughly rupturing or in cutting through them. This can be accomplished by means of the finger or the knife, as the case may be, introduced through a perineal incision. Perineal vesical drainage should be practised after the operation. Treatment such as this at my hands has been followed by complete disappearance of all subject symptoms."

BUNION.

Parker Syms (*New York Medical Journal*, Oct. 2, 1897) says the cause of this deformity of the foot is the wearing of shoes which are faulty in shape or are ill fitting. A shoe that crowds the toes together or pushes the great toe backward will tend to produce this trouble. In this class are shoes with the following characteristics: First, shoes with narrow points, with the point in the median line; second, shoes that are too short; third, shoes that are so loose at the instep as to allow the foot to ride forward, and thus bring direct backward pressure on the toes; fourth, the worst of all, are shoes which combine two or all of these defects.

This deformity has been ascribed to osteoarthritis, to suppurative arthritis, to rheumatism, and to gout; but bad shoes are its cause, and the arthritis is the result of the displacement they produce, and of the injury they do to the joint.

The condition will vary a good deal in different instances. In mild cases there is but slight deflection of the toe outward, and little or no dislocation. From this stage or degree on the increased deformity is owing rather to pathological changes than to mechanical conditions. A chronic arthritis is established. The internal lateral ligament is stretched, the external one is contracted. The joint surfaces may become eroded or eburnated. The weakened support finally allows complete dislocation, so that the toe will lie at an angle, perhaps a right angle, across its fellows. The tendons will of course become displaced. Some surgeons have made the mistake of considering the displaced sesamoid bones (in the tendons of the flexor brevis) as the cause of the trouble and not as one of the results.

In operating the writer makes an incision about an inch in length on the dorsum of the toe. In a mild case, after retracting the tendon of the extensor proprius policis outward, he chisels off all the overprominent portion of the inner side of the head of the metatarsal bone, removing as much bone as is necessary to do away with all protuberance; he then sutures the wound and lets it heal under one dressing. Usually the patient can walk about after the first week.

In more severe cases, where there is a marked adduction as well as lateral dislocation, Syms removes the head of the metatarsal with a chisel or bone forceps, and also cuts off the prominent inner side of that bone. To resect the head of the metatarsal bone it will be necessary to divide the lateral ligaments and completely dislocate the toe. This can be done with ease and satisfaction through the simple straight

incision described. It is necessary to remove so much bone that the toe will readily come into place and have no tendency to displacement. If this is not accomplished by the first ablation more bone must be removed.

The dressing must be carefully done and close attention given to the after-treatment, which should include the application of a plaster splint. The writer advises never to operate during an acute attack of inflammation; always to treat the deformity, and never operate on the bursa, for it will take care of itself after its cause is removed—the exceptions to this rule are the removal of callosities from the bursa when they exist, and the incision of bursæ when they suppurate; never to make the operation incision around or through the the bursa.—*Medicine.*

CAMPHOR IN HEART FAILURE.

C. C. West (*Philadelphia Polyclinic*, Oct. 16, 1897) recommends the hypodermic administration of camphor according to the following formula:

Camphor..... 1 part.
Olive oil..... 10 parts.
Inject two syringefuls into each arm (about 5 Cc. altogether).

With the ordinary needle the injection is difficult, because of the thickness of the oil. One having a slightly larger bore has been found excellent. In a case now under observation, in which the patient has a number of times been absolutely pulseless and apparently lifeless, its use was followed by the most gratifying results. It is given throughout the illness, whenever the pulse fails, to supplement other cardiac stimulants.—*Medicine*, Dec., '97.

N. B.—This is useful in cardiac depression during operation.

WHAT PRODUCES AND WHAT PREVENTS ANKYLOSIS OF JOINTS.

Dr. A. M. Phelps arrives at the following conclusions: (1) That a normal joint will not become ankylosed by simply immobilizing it for five months. (2) That motion is not necessary to preserve the normal histological character of a joint. (3) That when a healthy joint becomes ankylosed, or its normal histological character changed, it is not due to prolonged rest, but to pathological causes. (4) That immobilizing a joint in such a manner as to produce and continue intra-articular pressure will result in destruction of the head of the bone and the socket against which it presses. (5)

That atrophy of the limb muscles will follow prolonged immobilization of a joint. The question of ankylosis is determined by the severity and duration of the inflammation, the presence of intra-articular pressure, the subsequent cicatricial contraction of soft parts around the joints, the tissues involved, and the amount of destruction of bone and cartilage.—*Lancet-Clinic*, July 10, 1897.

INTRAVENOUS SALINE INJECTIONS IN COLLAPSE.

After an operation by Dr. Leonard A. Bidwell for intestinal obstipation, the following history is given: "The patient rallied well after the operation, and only vomited slightly. On the following day brandy, milk, and barley water were given by the mouth, and, as no flatus escaped on passing a rectal tube, an enema was ordered, but without any result, as the rectum was blocked with stoney feces. About mid-day on the second day after the operation the bowels acted four or five times copiously without any further enema, and all the abdominal distension disappeared. The patient, however, became considerably collapsed, but rallied after champagne and hypodermie injections of strychnine. At 9 p. m. she became worse and appeared almost moribund; her pulse was small and flickering, and the skin was cold; she also vomited slightly. My house-surgeon, Mr. Pardoe, immediately injected four pints of normal saline solution into the median basilic vein; almost directly after this the pulse became firm and full, and there was no more vomiting. The further progress of the case was quite uneventful. When last seen, four months after the operation, she was in excellent health, and did not have any trouble with her bowels."—*British Medical Journal*, May 8, 1897.

GANGRENE FROM CARBOLIC ACID.

Czerny (*Munch. Med. Woch.*, April 20, 1897) says that, in spite of the repeated warnings which have been given on this subject, there is not a year passes in which he is not able to show to his classes cases of gangrene brought about by the use of carbolic acid solutions as dressings.

They are generally produced by the continued use of moist dressings containing the officinal 3 per cent. solution of carbolic acid and applied as an antiseptic dressing for minor wounds of the extremities. The anæsthetic action of the carbolic acid makes the patient unmindful of the insidious action of the drug, and he is much surprised to see the fingers whiten and finally turn black; a line of demarcation

shows itself sharply, and amputation finally becomes necessary.

The author illustrates his subject by the report of three cases which were sent in from the country to his clinic. The danger of the solution, even a 1 per cent., is very great if the use is prolonged, and he advises that carbolic acid should never be used as a moist dressing. Other antiseptics are fully as efficient without this danger.—*The American Journal of the Sciences*, October, 1897.

EUCAINE "B" AS A LOCAL ANÆSTHETIC IN SURGERY.

Lohmann contributes to the *Therapeutische Monatshefte* for August, 1897, an account of his experience with this drug in minor surgery. He early abandoned weak solutions, preferring those of ten per cent., with which he obtained excellent results. He has employed the drug for opening abscesses, incising carbuncles, suture of tendons, removal of foreign bodies, and the exarticulation of fingers.

In the treatment of abscesses and carbuncles from fifteen to twenty minims of the ten-per-cent. solution was employed. For large abscesses three or four times this quantity was used. He is convinced that any abscess can be painlessly opened with this drug, as an amount equal to forty-five grammes maybe administered to an adult without fear of toxic symptoms.

He finds that Eucaine "B" has many advantages over cocaine. Not only is it less toxic, but it does not decompose under sterilization, and while dose for dose its anesthetic power is much less than cocaine, its employment in a ten-per-cent. solution gives us a very powerful local anesthetic without danger of toxic symptoms.—*Medicine*, Nov.

STERILIZATION OF CATGUT BY FORMALIN AFTER HOFFMEISTER'S METHOD.

Vinberg (*American Gynecological and Obstetrical Journal*, June, 1897) describes this process as follows: "The gut is first immersed in a solution of formalin of from two to four per cent., according to the size, and allowed to remain in this solution for a period of from twelve to forty-eight hours. The formalin is then removed by washing in running water for twelve hours. It is then boiled in water for fifteen minutes, after which it is transferred to a vessel containing alcohol, where it may be kept until required for use. Carbolic acid in the proportion of two to four per cent. is added to the alcohol and makes the gut more firm, but it should be removed to plain alcohol some time before using.

The secret of success in this method of preparation is to keep the gut in a high state of tension until after it has been boiled. Hoffmeister recommends that the gut be rolled tightly on glass; and Lange, of New York, has devised a small steel frame for this purpose.—*Medicine,* Nov.

THYREOID TREATMENT AS A MEANS OF CONSOLIDATION IN FRACTURE.

Gabriel Gauthier contributes to the *Lyon Medical* of June 27, 1897, abstracted in the *British Medical Journal* of September 18, 1897, an account of his experience with thyreoid feeding in delayed union of fractures. He was led to try the remedy because of its value in cases of disordered nutrition such as myxedema and rickets.

Hanau and Steinlein have called attention to the condition of the bones in dogs in which the thyreoid had been removed. Experimental fractures in thyreoidectomized dogs were slow in uniting. The suggestion was made first by them that thyreoid feeding might be useful in delayed union of fractures.

Gauthier reports two cases: One a girl with a fracture of the leg, had no union at the end of 110 days, though all the usual means were resorted to. A fornight after beginning the treatment the bone was consolidated and a month later she was walking. A man with delayed union of the radius was given thyreoids, and at the end of a month there was a firm callus.

The reporter admits that the material is too scanty to allow of a definite opinion, but thinks the results are suggestive and encouraging.—*Medicine,* Nov.

OBSTETRICS.

IN CHARGE OF

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MAY A NEPHRITIC MOTHER NURSE HER CHILD?

Not only she may, but she should, says Dr. M. Gamulin (*Le Scalpel*). As a rule physicians do not allow women, with any form of nephritis, to nurse their children.

It is considered especially inadmissible in patients whose diet is restricted to milk exclusively. The author has made observations on 158 women from Baudelogue's clinic, who,

while suffering with different forms of nephritis, nursed their own children. The latter developed as normally and increased in weight as regularly as the children whose mothers were healthy.

To the mothers the nursing was not only not injurious, but it seemed to do them good, as the exercise of this physiological function usually does. Only in cases of progressive albuminuria, and where the child loses in strength and weight, the nursing should be discontinued. (In a case under our treatment, where nursing was persisted in against our advice, the albuminuria became greatly aggravated.)—*H. L. R.*

TWO CASES OF PUERPERAL SEPTICÆMIA TREATED BY ANTISTREPTOCOCCIC SERUM.

Richard Richmond reports the following cases: Case I., a multipara had a chill the third day after delivery with a temperature of 102.2° and feelings of great discomfort. The lochia was scanty, pale and somewhat fetid, and there was tenderness over the uterus. A calomel purge and five-grain doses of quinine were given; there was slight temporary improvement, but three days later the temperature was 101.6°, and 10 c.c. of antistreptococcic serum were injected, the quinine being stopped. The next day the temperature was normal, and so continued; 5 c. c. of the serum were injected on that and the following day. All unpleasant symptoms subsided. and the patient soon recovered. The second case was a primapara, who was taken with a chill on the fourth day following a difficult case of breech presentation, with laceration of the perinæum. Vaginal douches of bichloride (1-2000) were given, and quinine administered. The temperature of 101.2 ° continuing, an injection of 8 c c. of serum was given followed by 5 c.c. on the following two days. The temperature dropped to normal, there was no fetor to the lochia, and the general condition was good. Three days later the temperature rose to 104 ° ; the lochia was very offensive, and there was great tenderness of the abdomen, with some exudation to the left of the uterus. The uterus was irrigated with bichloride solution (1-4000), hot fomentations were ordered for the abdomen, and 10 c.c. of serum were injected. The following day the temperature was 100 °, and 5 c.c. of serum were injected. The intra-uterine douche was repeated the following day, and the injections of serum continued for a week. But the temperature remained about 100 ° for twelve days, rising once to 102 °. After that the progress toward recovery was slow but uneventful.—*Am. Gynæc. & Obstet. Jour.*

ON THE INDICATIONS FOR AND METHOD OF WASHING OUT THE PUERPERAL UTERUS.

The writer arranges in a tabular form the principal conditions in which, in his opinion, the uterine douche should be used. There is no doubt that serious symptoms may follow this procedure, and it should not be lightly undertaken.

The indications are briefly as follows:—

(1) In cases of uterine tenderness and offensive lochia, with elevation of temperature and pulse rate. The finger should first be introduced into the cervical canal to ascertain if the uterine discharge is offensive. It is advisable to give chloroform, and explore the uterus with the finger before douching.

(2) When, with rapid pulse and rise of temperature, there is doubt about the complete removal of the placenta, or when portions of membrane are known to be retained.

(3) After the birth of a "putrid" fœtus. In many cases, however, a macerated fœtus is quite aseptic, so that, it seems to us, this is not always necessary.

(4) If the involution of the uterus is much delayed, due usually to retention of clots, more especially if there is any pyrexia.

(5) In certain cases where, as the result of acute flexions of the uterus, the lochia are retained, and decompose.

(6) In all cases after curetting of the uterus.

(7) In all cases in which the hand has been introduced into the uterine cavity, as in post-partum hæmorrhage, adherent placenta, etc.

(8) As a first step in all cases of septicæmia.

The author draws attention to several points in the technique of the operation. The patient should lie upon her back, with the shoulders raised and the head low, to facilitate free discharge of the fluid. In some cases it is better to place the patient on her side, having elevated the shoulders.

It is necessary also to assure oneself that the os uteri is sufficiently open. If it has closed a double-channelled catheter must be used, preferably of glass. A douche is much preferable to using a syringe, It is also essential to maintain pressure on the uterus to prevent fluid passing into the Fallopian tubes. Dr. Mills advises that an assistant should hold the fundus uteri, with a hand at each side, so as to compress the entrance to the Fallopian tubes. This is more especially important, as the uterus is often atonic, and the cavity very large.

The solution recommended is weak perchloride of mer-

cury, avoiding its use, however, in severe anæmia and disease of the kidneys.

It is usually advisable to administer chloroform the first time that the uterus is douched out.

PUERPERAL SEPTICÆMIA TREATED WITH ANTISTREPTOCOCCIC SERUM—RECOVERY.

G. T. Howard, of Melbourne (*Intercolonial Med. Jour. of Australia*, October 20, 1897), reports a case of primipara, who was delivered by forceps after a tedious labor, with lacerations of the cervix and perinæum. The latter was immediately repaired. Placenta was easily expressed and the uterus irrigated with a one per cent. solution of carbolic acid. The next day the temperature was 101.6° and on the day following 103.2°. This continued until the fifth day, when curettage was performed, bringing away some shreddy lymph. The temperature persisting on the sixth day, 10 c c. of antistreptococcic serum was injected; this was repeated twice at intervals of about fourteen hours. Each injection was promptly followed by a fall of temperature, succeeded by a slight rise. After the third injection the temperature was 100°, continuing so for three days, and not until three weeks after the confinement was the temperature normal. Vaginal irrigations of perchloride of mercury were used for a week after the curettage, then carbolic was substituted.—*Am. Gynæc. & Obstet. Jour.*

PUERPERAL INFECTION TREATED WITH INJECTIONS OF ANTI-STREPTOCOCCUS SERUM.

T. J. Henry, of Grafton, N. S. W. (*Australasian Med. Gaz.*, October 20, 1897), attended a primipara, aged fifteen years. She had been in labor for twenty-four hours when first seen, and the os was not then fully dilated. After a tedious second stage forceps were applied and a male child weighing eight pounds was delivered. There was no laceration. Seven minutes after birth there was a sudden hæmorrhage. The placenta could not be expelled by Crede's method, and the hand had to be inserted into the uterus, Bimanual compression failed to check the hæmorrhage, but injections of very hot water ultimately secured contraction of the uterus. No secundines remained in utero. On the fifth day the patient had prolonged rigors, temperature 104.6. The uterus was irrigated with a two per cent. lysol solution. This was followed by a fall of one degree in temperature;

20 c.c. of antistreptococcic serum was injected and three hours later the temperature was 100°. The following day the temperature having risen to 101°, the uterus was again irrigated, and the injection of serum repeated. In four hours the temperature was normal. A vaginal douche of lysol solution was given the day following, and the patient was up and perfectly well on the eleventh day. The infection was probably due to intra-uterine manipulations necessary to control hæmorrhage.—*Am. Gynæc. & Obstet. Jour.*

BROW PRESENTATIONS AND THEIR TREATMENT.

Rose discussed this subject at a recent meeting of the Hamburg Medical Society, and reports a case of a brow presentation in which the head was firmly fixed in the pelvis. The membranes had ruptured six hours before. There was danger from rupture of the uterus. An attempt to deliver with forceps failed. Rose then introduced a finger into the mouth, pulling down the chin and rotating the same entirely. After this delivery was completed with the forceps.—*Amer. Jour. Obstet.*

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, October 29th, 1897.

ROBERT CRAIK, M.D., PRESIDENT, IN THE CHAIR.

Dr. Geo. Fisk, of Montreal, was elected an ordinary member.

ULCERATION OF THE BOWEL RESEMBLING TYPHOID FEVER.

Dr. J. G. ADAMI showed this specimen, a report of which will be published later.

Dr. A. G. NICHOLLS stated that at the time of the autopsy Peyer's patches higher up in the ileum showed signs of healing typhoid lesions. The spleen had not been that of typhoid fever, being rather smaller than normal.

Dr. WYATT JOHNSTON thought that the ulcers were strongly suggestive of typhoid fever, especially as they were accurately in connection with lymphatic structures. They, however, showed more evidence of cicatrization than was usual, and there was an absence of pigmentation, whereas healing typhoid ulcers were usually slaty. He considered that the absence of the serum reaction was not of much moment at so late a stage. Several fatal cases had been recorded where it was absent just before death. The blood from the

present case gave negative results, even in 1—2 dilutions. He thought that the nature of the disease here could only be decided from cultures. It was not unusual to find the spleen not enlarged at this stage of the disease.

Cholecystitis Enterica.

Dr. C. F. Martin read the report of this case.

Dr. James Stewart referred to the great difficulty met with during life in making a diagnosis in this case. Thus, appendicitis, typhoid perforation, and cholecystitis were all entertained. A definite diagnosis of typhoid had been made before the patient entered the hospital, and by some the symptoms were all explained by a perforation having taken place. Others considered the case to be one of appendicitis, and the unusual seat of the pain for this condition did not entirely exclude this disease, as in some cases the appendix had been found lying quite as high up in the abdomen. The limited localization of the symptons over the gall-bladder pointed strongly to this organ, and caused him to decide upon cholecystitis; the absence of jaundice was, however, confusing. The fact that typhoid bacilli might be the cause of a cholecystitis was not admitted by the surgeons.

Pyopneumothorax.

Dr. W. F. Hamilton presented a patient and demonstrated the above condition, drawing attention to the following points of interest in the case:

1. The occurrence of pneumothorax was of tuberculous origin, as bacilli had been found in the sputum and also in the purulent effusions from the pleural cavity on two occasions.

2. The case had an exceptionally chronic course, fourteen months having elapsed since it was first recognized.

3. There was strong evidence to show that the tuberculous process began in the left lung, and after pneumothorax occurred the process had not manifestly advanced.

4. The freedom from fever, chills and sweats was to be noted as rare with pus formation, while an increase in the body weight had been observed.

5. The recurrence of febrile temperature, with increased cough and expectoration, was simultaneous with signs of commencing lesion in the opposite lung.

Dr. J. B. McConnell said that it was stated that ten per cent. of all cases of phthisis developed pneumothorax, accounting for nine-tenths of the cases. An interesting point about the present case was why, with such a large amount of pus being produced in the thorax, there had been no temperature and the patient's strength had been maintained so long.

Dr. George Wilkins referred to another instance in which a large amount of pus had been present in the thorax for considerable time without causing any elevation of temperature. The patient was a young man who came to his office complaining of a small tumour in the right side which turned out to be empyema. The only subjective symptom was shortness of breath.

Typhoid Fever without Intestinal Lesions.

Dr. A. G. Nicholls read a paper with the above title.

Dr. Wyatt Johnston thought the case reported was an extremely interesting one, and pointed out that this was one of the cases where serum diagnosis had given a positive result which the post-mortem had apparently shown (until bacteriological examination was made) to be incorrect. He thought it was very important in any case where there was discrepancy between the serum test and the diagnosis to do the test quantitatively.

Dr. Jas. Stewart said that this case illustrated the great practical value of bacteriology in clinical medicine. At the outset, during life, the serum diagnosis had been the only means of determining the nature of the disease, and after death, if it had not been for the bacteriological examination made by Dr. Keenan, the real disease would have been overlooked.

Dr. Geo. Wilkins had hitherto believed that typhoid fever always required the presence of an ulcerative condition of the intestines. Although the lymphatic tissue was the usual channel of entry of the bacilli, he thought that there must be other sources as well, otherwise it would be difficult to explain the presence of bacilli in the urine in the cases cited, where the lymph glands were not involved.

Dr. J. B. McConnell thought that one was not warranted in making a new type of "typhoid without intestinal lesions," as, even in the case reported, there were slight lesions in the lymphatics. The idea that it was possible to have such slight intestinal involvement enabled us to take a broader view of the disease, and cease to describe as complications those nephritic, pulmonary, cerebral and other varieties occasionally met with, but rather to regard the affection as one in which the specific cause might exert its influence in various parts of the body and produce its typical manifestations from other points than the intestinal canal.

Dr. Nicholls, in reply to Dr. Wilkins, said that he did not mean to imply that the bacilli were confined to the lymphatic system. They eventually did get into the blood and thence to all parts of the body. Dr. Adami had suggested that the lymphatic system acted as a sieve, and thus accounted for the relative infrequency in which they were found in the blood.

In reply to Dr. McConnell's criticism on his choice of a title, he pointed out that the intestinal lesion had been so slight that had it not been looked for specially it would not have been detected during an ordinary examination. The hyperplasia of the Peyer's patches affected was so extremely slight that the condition did not suggest typhoid fever.

Stated Meeting, November 12, 1897.

Robert Craik, M. D., President, in the Chair.

Excision of the Tongue.

Dr. G. E. Armstrong exhibited a patient operated upon for cancer of the tongue and gave the following report:

I have recently had in the wards of the Montreal General Hospital an unusual number of cases of cancer of the tongue. There has been a marked difference in the location of the cancer. In this man the disease began on the right border of the tongue, well back, opposite to the molar teeth. He first entered the Montreal General Hospital in June last. The growth was then small and limited to the border of the tongue. A small piece was snipped off, and Dr. Wyatt Johnson reported it to be an epithelioma. The man declined to have any operation performed, saying that he preferred to die with his tongue in his mouth. He returned to the hospital in the beginning of October. Infiltration had taken place rapidly during the interval and in a downward direction. The whole floor of the mouth was involved. He could hardly speak so that he could be understood, and he said that the constant pain day and night was so severe that he could get but little rest, and begged to have the tongue removed on account of the pain. The deep involvement of the floor of the mouth and the presence of enlarged glands in the submaxillary region determined me to remove the tongue by Kocher's method. I performed the tracheotomy and excised the tongue at the same operation, and I saw no reason to regret doing so. The lateral incision of Kocher enables one to remove enlarged lymphatic glands and the submaxillary gland. The mouth is then entered laterally just beneath the lower jaw. The patient being tracheotomized, the pharynx can be plugged with a sponge and blood be prevented from entering the air passages. The access to the floor of the mouth is good, and during convalescence the patient breathes a pure air through the tracheotomy tube, and thus the danger of aspirative-pneumonia is lessened. I believe this method of removing the tongue to be an admirable one, when the floor of the mouth is deeply infiltrated and the glands at the side of the neck enlarged.

In another case upon which I have just operated, the disease was seated just at the bottom of the frænum. It was placed so low just below the border of the jaw that it was difficult to remove a piece for the microscope. In this case I did the old operation, originally devised by Roux, and generally known in England as Syme's. That is a median incision through the lower jaw. This method enabled me to get well at the seat of the trouble, and I think I effected a more thorough and wide removal of the diseased area in this case by a Syme's operation than I could have done by any other.

I think that most surgeons consider Whitehead's operation, with or without preliminary ligature of the lingual arteries, as the operation for removal of cancerous disease of the protruding portion of the tongue, but I am satisfied that it is unwise to allow oneself to be limited to one operation. Disease chiefly seated in other than the protruding tongue may sometimes be more thoroughly extirpated by other methods.

But in the future we must aim at arriving at a correct diagnosis earlier in the course of the disease, and by early and complete extirpation strive to remove the whole of the affected area, which all pathologists agree is at first a local disease, and thus prevent recurrence.

Death by Electricity.

Dr. Wyatt Johnston reported five cases, in three of which death was due to the passage of the electrical current through the body. In one of the others a motor man, having climbed to the top of his car to look after the trolley wire, received a shock which caused him to fall to the ground. He picked himself up and was sent home, but died a few hours later from what the autopsy showed to be a fracture of the base of the skull, with intracranial hæmorrhage. The medico-legal diagnosis was very easy in this instance, but was less so in the second case, where a line-man working in wet weather on the cross bars of a telephone pole received a shock from an electric light current which had fouled a telephone wire. He was seen to fall to the ground and died a few minutes later. An autopsy by Dr. Villeneuve showed the cause of death to be a hæmorrhage at the base of the skull, some of the blood having been inspirated into the lungs and finer bronchi. Examination made independently by both himself and Dr. Villeneuve showed no signs of burning on any part of the body. The company were held responsible, although the fact that death was not due to the shock was evidenced from the time that must have elapsed to allow the blood to be drawn into the lungs.

Case three (communicated by Dr. Villeneuve) was that of a man who picked up one end of a broken live wire to show that there was no danger in so doing. The marks of the burning were present on the hands and ecchymoses on the surface of the body. No autopsy.

In case four a man made a connection between two wires by stepping on one while the other was touching his arm. The leather in the sole of his boot was burnt and his jersey charred, but the burns upon the skin were of a very slight degree—an interesting point.

In case five a man received the fatal shock from a badly insulated wire while sitting between two other men upon the cross bar of an electric light pole. Some minutes elapsed before the body was taken down, and during this time the current was passing. The burns here also were extremely slight in spite of the long exposure, and no second point of contact could be found. A small morsel of a clay pipe which the man held between his teeth was inspirated into the smaller bronchi, and the blood at the autopsy was found fluid, and remained so for one week. This condition was due to the continuous passage of the current, other causes of absence of clotting having been examined for and excluded.

It was not generally known that not only the fatal shock but also the typical changes could occur with such slight lesions through contact with a live wire.

Dr. G. P. Girdwood related a case of lightning stroke which had come under his observation, and in which very extensive burning of a slight degree had occurred without a fatal result. He pointed out that the effect of the electric fluid upon the body depended both upon the suddenness of the shock and the duration of the current, the latter factor producing the electrolytic action upon the fluids of the body.

Dr. F. W. Campbell referred to a case where a man, after exposure to a very severe thunder-storm, but without being actually struck by the lightning, had gradually lost every hair on his body. Other instances of baldness produced under similar conditions were also on record.

Experiences of two hundred and forty-eight Cases of Abdominal Sections.

Dr. Lapthorn Smith read a paper with the above title. The cases extended over a period of eight years, and showed a total mortality of $6\frac{4}{5}$ per cent., varying between 17 per cent. in 92, to $3\frac{1}{3}$ per cent. in 96.

The cases included the removal of two large tumors of the kidney, eleven large ovarial tumors with two deaths, fourteen abdominal hysterectomies with four deaths, nine ventral and umbilical hernias with no deaths and sixty-two double pus tubes with five deaths.

He alluded to the many cases in which it had been impossible to obtain the patient's consent to an operation, although he could confidently say they would be benefitted thereby; of such were cases of diseased tubes suffering from recurring attacks of pelvic peritonitis and incurring the risk of having recto or vaginal fistula formed with perhaps fatal results. In cirrhotic ovaries, operation was not proposed until a year of local treatment had failed to obtain relief.

With regard to the conservative treatment of diseased ovaries, *i.e.*, cutting out cysts without excision of the organ, Dr. Smith stated that his experience led him to the conclusion that it was a mistake.

Among the interesting cases mentioned was one of obstruction of the bowels occurring ten days after removal of the appendages. At the second operation, performed nine hours after fæcal vomiting had set in, the bowel was found kinked and adherent to the abdominal wall, and on being freed a perfect recovery resulted.

Seven cases of tubal pregnancy, in four of which a correct diagnosis had been made, were reported. All recoveries. The particulars have been already published.

Hernia following operation had been unknown during the last three or four years; this he attributed to the fact that the sutures were left in place for one month. Since using the Trendelenburg posture, drainage had been practically discarded altogether; the abdomen was flushed out with a large quantity of salt solution, and from one to eight quarts of it left in the abdomen. This procedure served to satisfy thirst, prevent adhesions, wash out the kidneys and strengthen the pulse.

Dr. F. A. Lockhart thought that Dr. Smith was to be congratulated on his success with his cases of ectopic gestation. He felt that the question of conservative surgery was a trying one, whether it arose concerning the surgery of the pelvis or that of other parts of the body. It was always a difficult matter to decide whether or not one ovary was to be left, but thought this should always be done when it was healthy. Even if after operation the remaining organ gave trouble, this was often to be accounted for by its increased activity, causing it to become swollen and tender, and rest and local treatment often effected a cure.

Stated Meeting, November 26th, 1897.

ROBERT CRAIK, M. D., PRESIDENT, IN THE CHAIR.

Dr. R. A. Kerry and Dr. D. D. McTaggart were elected ordinary members.

LICHEN RUBER.

Dr. F. J. SHEPHERD exhibited a patient, a man aged 35, who had suffered from lichen ruber for seven years. Coincident with the appearance of this disease he became paralysed in the left side; especially was the paralysis marked in the left arm. The patient's appearance was very characteristic; the general redness of the surface, with some healthy patches of skin on abdomen and back; the loss of hair of head, eye-brows, eye-lashes, pubic hair, and axillary hair; the ichthyotic appearance of the skin in parts and in other places such as legs, elbows, buttocks, the acuminate condition of the eruption about the hair follicles and the plugging of the follicles with dried epidermis; the absence of any tendency to form vesicles or pustules.

This disease is sometimes called "pityriasis rubra pilaris," and there has been much discussion about it, it having been confounded with pityriasis rubra, lichen planus, etc. It was first described by Duvergie, then more fully by Hebra, who included with it the lichen planus of Erasmus Wilson, which inclusion has caused much confusion.

The prognosis is always grave, no case of true lichen ruber having had a favourable termination. Treatment is of but little use. Cod liver oil and local washings and the application of unguents is all that can be done. Arsenic is only of use in the early stages.

The paralysis existing in this patient Dr. Shepherd thought was an accidental complication and not the result of the disease.

Dr. W. F. HAMILTON, a few months since, had had under his care an old gentleman of sixty years of age suffering from Bright's disease, whose body from head to heels was covered with an eruption presenting the following characteristics: Very deep redness, desquamation, areas of a peculiar coppery colour, evidently staining due to former involvement of the part, enlargement of the glands in the neck and axilla, and extensive papular areas which seemed due to local irritation from scratching. Dr. Hamilton had been puzzled between lichen ruber and pityriasis rubra. The disease had lasted twenty years and involved every part except the face and the hands. Finally, the case was looked upon as one of pityriasis rubra with nephritis. The patient died a few weeks ago from Bright's disease.

REMOVAL OF FOREIGN BODY FROM THE CHEEK.

Dr. J. M. ELDER exhibited a steel pen which he had removed from the cheek of a young man. The history, in brief, was as follows:

The patient, aged twenty-four, consulted him for a swelling

on the left cheek; and, on examination, a fluctuating tumour was found high up under the zygoma at the anterior border of the masseter muscle. Seventeen years previously, while running with a pen in his hand, the boy had fallen and the penholder had entered his left cheek in an upward direction opposite the angle of the mouth. The penholder was withdrawn, and as there was no nib on it none was supposed to have been there at the time of the accident. On opening through the buccal mucous membrane, some fluid and pus escaped, and Dr. Elder had great difficulty in removing small portions of the nib that were caught in the forceps. The wound soon healed, but two weeks later a fluctuating abscess formed opposite the old scar on the skin. This was incised and by means of a fenestrated Volkman's spoon, the pen, as shown, was turned round, the point gripped with the forceps, and drawn out without difficulty. The interesting point of the case was the length of time a steel object could remain in the tissues without being very much corroded, and without causing any symptoms.

Dr. Rollo Campbell referred to a case he had seen in the London Hospital of a somewhat similar nature. A patient shortly after being sent in was found to have some interference with the venous return through the back of the orbit and died that night with symptoms of pressure on the brain. At the autopsy, a portion of a penholder was found, the supposition being that it had entered through the nose.

Diabetes Mellitus.

Dr. Ridley Mackenzie reported this case.

Stated Meeting, December 10th, 1897.

Robert Craik, M.D., President, in the Chair.

Drs. W. M. F. Nelson, M. Lauterman and G. D. Robins were elected ordinary members.

Intraligamentous Myoma.

Dr. Wm. Gardner reported this case, and exhibited the tumour which he had removed as follows:

Madame V., æt. 32, married nine years, nullipara, was admitted to the gynæcological service of the Royal Victoria Hospital on November 6th, 1897, complaining of abdominal pain and enlargement, profuse and painful menstruation, and difficult and painful micturition and defæcation.

Soon after her marriage the patient noticed a lump of the size of an orange in the hypogastrium. There was progressive enlargement for two years subsequently, when a surgeon of another city operated, removing a part of the tumour. The same surgeon again operated two years later, but with only partial success.

On examination the abdomen was enlarged equal to a six months' pregnancy by an uneven, very firm, almost hard, fixed mass. Vaginal palpation revealed the pelvic cavity completely filled almost to the lower outlet by the tumour. The examining finger

could be passed upwards only close to posterior surface of the pubes, but could not be made to reach the cervix uteri or fundus of the vagina. The operation was exceedingly difficult, tedious and long, involving, as it did, a most extensive enucleation, during which important blood-vessels and the left ureter must have been in imminent danger. The position of the uterus and bladder pushed up into the abdominal cavity, and to the extreme right of the pelvic brim, must have involved immense stretching of this duct, and a very close relation to the tumour, in a furrow of which it may have lain, as so often observed in similar cases. These dangers were, however, averted.

The altered relations of the peritoneum, by reason of the situation, size and direction of the tumour, were interesing. The anterior lamina of the broad ligament was raised so that on the left side the perineum was separated from the anterior abdominal wall to the extent of at least eight inches, while behind the tumour had separated the layers of the meso-colon of the sigmoid flexure and lay closely in contact with it.

The operation was completed by amputation of the uterus at the supra-vaginal cervix, and the packing of the enormous cavity, now, however, much contracted, by iodoform gauze. The considerable loss of blood and long duration of the operation brought the patient before its close to a very critical condition. By the use of sub-mammary transfusion of normal salt solution and hypodermics of strychnia, she was kept alive and got to bed. Reaction was not fully established till six hours later.

Convalescence has been retarded by a severe attack of bronchial catarrh and some suppuration of the cavity whence the tumour was enucleated, but there is no reason to doubt ultimate complete recovery. The weight of the tumour was six pounds.

Dr. F. J. SHEPHERD asked, regarding the enucleation of these large tumours, whether it was ever done rapidly, or always slowly, as in the present case, ligating the vessels as one went along. From his experience with tumours of the thyroid he had come to the conclusion that the slow method was always the best, the rapid being often disastrous.

CASE OF RUPTURED TUBAL PREGNANCY—LAPAROTOMY—RECOVERY.

Dr. G. T. Ross said that he had visited the patient (on 28th November), and her history in brief was as follows ; After the last *accouchement*, ten years previously, menstruation had been regular until November of the present year, when about a week after the ordinary period she had had another bloody discharge, lasting seven days, and, following that, more or less nausea and vomiting until, on November 26, she had unusually severe pain on the right side for twenty-four hours with chills and fever. The family physician at the last named date called in a consultant, when pregnancy was diagnosed and a favourable prognosis given. Three days later Dr. Ross was asked to see her, and the following condition was present :

Patient was found with a temperature of 101½°, and pulse of 122, great prostration, blanched face and anxious countenance. Nausea and vomiting were present. There was great tenderness over the abdomen extending up to the epigastric region, but palpation gave no evidence of any special resistance or any tumour. *Per vaginam*, the uterus was not found enlarged, but there was specially great tenderness on the right side of this organ. Although there were few positive symptoms pointing to extra-uterine fœtation, he regarded the case as such, to the exclusion of other conditions, considering that rupture of a tubo-ovarian gestation would account for most of the symptoms. On his advice the patient was removed to the hospital and a laparotomy performed.

Dr. LAPTHORN SMITH reported the operation as follows: The patient, whose history has been already given by Dr. Smith, was a Jewish woman, Mrs. K., 28 years of age. The operation took place just a week ago to-day, and there is hardly any doubt but that she will make a good recovery.

On examining her I found her with a very weak and rapid pulse, slightly elevated temperature and distended abdomen. On examination the uterus was found normal in size and position, and nothing could be made out the matter with the tubes and ovaries. It was thought advisable to delay operating a little until the bowels could be moved and the pulse improved. This proved unwise, however, for her pulse grew worse, until it reached 150, and in twenty-four hours she was vomiting worse than ever, some of the ejecta appearing decidedly fæcal. This led me to suspect the possibility of obstruction of the bowel, and made me more anxious still to operate at once and at all hazards, although she refused to submit to operation until the last minute. On opening the abdomen, back blood gushed forth, and on introducing the hand large clots could be felt filling the cavity. The right tube, from which the blood was pouring, was seized and tied and removed with the ovary. The fœtus, about an inch and a half long, was found among the clots. The fœtus and placenta had been expelled through the tear in the tube, the distended and torn tube being entirely empty. The quantity of clot and fluid blood removed was estimated by my assistants at between three and four quarts. After this had been removed a gallon of hot salt solution was poured into the abdomen and left there. Besides that she received three quarts of salt solution by enema the first day, which she retained, and two quarts the second day, by the end of which time her pulse, which was 150 before the operation, had fallen to 80. I think we have reason to be proud of our profession when we see a general practitioner of it diagnosing accurately and at once such an obscure case. Unless this diagnosis had been made and acted upon, this woman was condemned to certain death.

This is my ninth case of laparotomy for tubal pregnancy, and so far all the patients have recovered.

I would like to call attention to the value once more demonstrated in this case of artificial serum in the abdomen and administered by enema. The result on the patient's pulse was marvellous and unmistakable.

Intestinal Resection in a Child aged Four.

Dr. E. A. Robertson read the report of this case.

Sir Wm. Hingston said he had nothing to add to the report of the case, which was very clearly given; but had a suggestion to make in the way of a correction of terms. He had always objected to the term "exploratory incision," as he did not consider that an operation for the purpose of establishing diagnosis was justifiable. In this case it was not an exploration; the diagnosis was made beforehand, and not till then did they proceed to perform the operation. Although death had taken place, it did not alter his opinion that the operation was a justifiable one, and the only one possible under the circumstances.

Dr. F. J. Shepherd was much interested in the case, but must take exception to some points raised by Dr. Robertson. He did not believe in fæcal accumulation as a cause of tumour; when there was a fæcal accumulation it was always produced by a stricture either malignant or otherwise. No operator had ever seen such a condition simulating tumour, and he was not aware that any pathologist had ever seen it *post-mortem*. Another point was the mortality statistics presented by Dr. Robertson; in abdominal surgery old statistics were useless, or worse, they were misleading; methods had so altered in the last ten years that one should not go back beyond that period to obtain a basis for estimating mortality. He did not agree with Sir William Hingston concerning the uselessness of exploratory operations; he thought in cases like this it was impossible to make a positive diagnosis, and that an exploratory operation was justifiable. He would like to ask how Sir William, in this case, made a positive diagnosis of mesenteric tumour. He would like to draw Dr. Robertson's attention to a paper on Solid Mesenteric Tumours in the July number of the Annals of Surgery, where 57 cases are collected, also to the speaker's own case which was shown to this Society last winter.

Some Recent Gall-Stone Cases.

Dr. James Bell read a paper with this title.

Dr. F. J. Shepherd considered cholecystotomy one of the most successful operations in modern surgery. Incision of the common duct was not to be classed in the same category, as it was a much more serious operation. He was surprised that among such a large number of cases there was no case of malignant disease. The frequency with which gall-stones existed in the female gall-bladder was not sufficiently recognized. Dr. Shepherd thought it was due to the constriction of the abdomen which caused obstruction of the cystic duct. In a case last summer, the speaker had cut down and come upon a distended gall-bladder which simulated appendicitis. The case recovered.

Dr. Shepherd also asked whether, after incision of the common duct, Dr. Bell preferred to sew it up or simply to pack it round with gauze, leaving in a drainage-tube. In a recent article, Mr. Jordan Lloyd mentions that he cut down on the ureter for impacted

stone; after first making an abdominal incision to determine the place of the stone, he opens into the ureter outside the peritoneum and does not close the incision up again; no leakage of urine took place from the incision in the duct.

Dr. W. F. HAMILTON referred to the following case of cholelithiasis as of interest. A young French-Canadian, a painter, came to the hospital complaining of severe pain in the region of the liver off and on for five to seven years. At that time there was a slight icteroid tinge to the conjunctiva; the urine contained bile, and there was tenderness over the gall-bladder. The temperature was slightly raised. The speaker suspected catarrhal duodenitis, and expected catarrhal jaundice to develop. The following morning, however, on examining the stools, quite a large gall stone was found. The surface of the stone suggested the presence of others. He left the hospital in a few days fully relieved.

Dr. G. A. BROWN drew attention to the fact that some days might elapse after the stone had left the duct before it appeared in the stools. He related one in which three days had passed before it was found in the stools.

Dr. E. A. ROBERTSON thought the statement that the stone was sometimes passed without causing any symptoms was most improbable.

Dr. BELL, in reply, said that two of the cases had been sent to him as cases of appendicitis, and that the physical signs and symptoms had given good ground for this diagnosis. He always sutured the gall-bladder to the peritoneum only, and always closed the incision in the ducts by suture, using fine silk as suture material. He also introduced a drainage tube and packed off the space with gauze, but did not feel safe in trusting to these alone; where it was possible, he preferred to close the incision by suture. He did not think the incision in the ureter, as mentioned by Mr. Jordan Lloyd for the removal of ureteral calculi, was quite a parallel case, as there was always a great flush of bile when the stone was extracted from the common duct. Besides, the ureteral wound was entraperitoneal, He was quite sure that gall-stones often existed for a very long time without giving rise to any symptoms, and referred to case IX. in this series as evidence that a number of stones had existed for a long time in the gall-bladder, and only gave rise to symptoms when disturbed by an accident. One case had had high runs of fever, and three of the cases where cholecystitis existed (besides the typhoid case) had had moderate fever. He had not discussed the prevention of gall-stones, as the cases reported were those in which the stones not only already existed, but had given rise to serious symptoms. He was quite sure, however, that the size and number of the stones found in a given case was not determined by the age or sex of the patient. In general terms, he thought it might be stated that stagnation of the bile in the gall-bladder was an important factor in the causation of gall-stones, and that constriction of the waist as seen in women, and certain positions, such as that assumed by a man sitting at a desk, contributed to this end by making it more difficult for the gall-bladder to empty itself.

THE

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Editorial.

COMPLIMENTARY SUPPER TO DR. W. H. DRUMMOND, AUTHOR OF "THE HABITANT."

Few authors have their first literary ventures so thoroughly appreciated and the true merits of their production so early recognized as has Dr. Drummond, our esteemed *confrère*, in the issue of his book of poems entitled "The Habitant."

The new field from which the material of these poems has been culled is one belonging almost entirely to our Province of Quebec, and has, under the hand of one who during a lifetime has been able to observe all the traits of character peculiar to the habitant, proved a fertile source of interest, and the author, who is thoroughly imbued with true poetic genius, has woven in a unique production descriptive and historical pictures of their peculiarities, brimming with pathos and humour.

It is not surprising that readers in this Province who are familiar with the characteristic features of this class of our rural population and their attempt to express themselves in English should thoroughly appreciate the truthful representation these poems convey, but it is a matter for the fullest congratulation to Dr. Drummond and this country that this work has been eagerly sought after and praised not only by readers in Canada but throughout the United States and in England, so that publishers and author have been gladdened

by the demand for edition after edition in a manner quite unprecedented in the annals of Canadian authorship. Hence it is easy to understand the appropriateness of the slight token of appreciation conveyed in the complimentary entertainment given to Dr. Drummond by his *confrères* in this city. For once, the members of our profession in meeting together eschewed medical topics entirely, and the after-dinner oratory, songs and recitations suited the event which the gathering was intended to celebrate. We thoroughly sympathize with the sentiments of Dean Craik as expressed during the evening, when he urged more recreation for the members of our profession in the way of keeping abreast in general literature, and dropping entirely from time to time medical subjects and taking more interest in general literature, art and science and subjects other than professional. This spirit of outside interest, and even of a disposition to contribute to general literature, seems to be growing in our profession. We may not all possess the attainments of a Conan Doyle, an Oliver Wendell Holmes or a Drummond, but occasional attention to topics outside of medical would serve as a recreation and broaden our ideas, and put us more in harmony with the highest interests of the community in which we reside. It is interesting to note in this connection that two novels have recently appeared in the United States by members of the Medical Profession. One by S. Weir Mitchell, entitled "Hugh Wynne, Free Quaker, some time Brevet Lieutenant Colonel on the Staff of His Excellency General Washington." It is said to have had a very large sale, and to be a charming historical novel, very interesting, with artistically depicted characters, and giving an insight into the character of one of the noblest names in history, George Washington. This is only one of a number written by Dr. Mitchell. The other is by Dr. Alexander J. C. Skene, entitled "True to Themselves. A Psychological Study"—his first venture in this line, and is said to be worthy of the eminent medical author. We give the following account of the supper to Dr. Drummond as reported by the *Montreal Medical Journal*.

On the evening of December 23rd, Dr. W. H. Drummond was entertained at supper in the St. James Club by the

following medical friends: Drs. Armstrong, James Bell, Birkett, A. A. Browne, K. Cameron, F. W. Campbell, G. G. Campbell, Craik, Elder, England, Evans, Finley, W. Gardner, Garrow, Girdwood, W. D. Hamilton, W. F. Hamilton, Sir W. Hingston, J. A. Hutchison, Lachapelle, Lockhart, McCallum, McCarthy, McConnell, Tait McKenzie, McPhail, Perrigo, Shepherd, Grant Stewart, J. Stewart, Webster, Wilkins, C. W. Wilson.

The supper was decided upon only two or three days beforehand, and no effort was made to organize a large and formal gathering. Had such a plan been attempted there would have been no difficulty in getting together a very much larger body of Dr. Drummond's medical brethren, who would have been glad to do honour to the author of "The Habitant."

The Chair was occupied by Sir William Hingston, who presided with his customary grace and dignity, his remarks being at all times characterised by their fitness and felicitousness. After the toast of "The Queen" had been drank, Sir William proposed "Our Guest" in a very happy speech, expressing the genuine congratulations of those present on Dr. Drummond's literary venture, with the hope that it might be only the precursor of a long series of successes.

Dr. Drummond replied in the following words:

Mr. Chairman and Gentlemen, or if you will permit me to use the term inclusively, *friends*, I am naturally very proud, and very, very grateful for the position in which I find myself placed to-night, for in the wildest flights of imagination the diaphanous casement of my brain (as dear old Father Prout puts it) had never, I assure you, been penetrated by the thought that some day, "Some day," or rather some evening, my beloved *confrères*, the medical men of Montreal, would extend to me the honour of a dinner—and when the news was gently conveyed to me the other day by our genial friend, Dr. Armstrong, it was as unexpected as undeserved. However, when a committee of physicians and surgeons, such as the present one, unanimously decide upon the line of treatment in any particular case, what can the wretched victim do but submit quietly to the anæsthetic and let them "Fire away, Flanagan."

But seriously, Mr. Chairman and Gentlemen, Why this special act of favour? Was it a recognition of the fact that my attempt to provide for our country a literature purely "Canayen" in character had met with a partial degree of success?

It could not have been for any other reason. My name will probably never be found in medical text-books, attached

for instance to some great medical or surgical discovery, but in conjunction with my good friend, Dr. Charlie Wilson, perhaps for a few years there may linger in the minds of those present to-night, memories (not altogether unpleasant I hope) of the Wilson-Drummond enunciation; for, gentlemen, I have no hesitation in saying that, so far at least as *you* are concerned, to Dr. Wilson belongs the major part of the *discovery*. For from the very first moment that the Doctor left his native fastnesses of Buckingham, P. Q., for, possibly, the more congenial atmosphere of Montreal, he patiently experimented and demonstrated, largely before medical audiences, until now the Wilson-Drummond enunciatory *râle* is apparently accepted by some of the most distinguished men in the profession.

> "There was a Duke of Buckingham, who never did a thing
> But strut around the court, and keep the lasses on a string,
> I believe His Excellenza was perhaps a trifle gay,
> But the *present* Duke of Buckingham isn't built that way."

No, gentlemen, Dr. Wilson was the first to recognize the premonitory symptoms of the hitherto unknown Canadian disease. What did he do? Being of course a firm believer in the science of inoculation, he at once proceeded to infuse, cautiously perhaps at first, little by little, virus, supplied *not* from the laboratory of Merck, but from the Wilson-Drummond laboratory, into the systems of those who would consent to the operation, the Doctor, naturally, hoping by this means to stay the threatened march of the disease. Medical men are ever, in the interests of science, among the first to risk experiments, hazardous not only to life, but also to reason, and many underwent the painful ordeal. The disease, however, continued to spread; the devoted Doctor laboured assiduously, and the amount, especially of night work, which he was compelled to undergo, threatened seriously to undermine his health.

New centres of contagion sprang up, and the disease, which at first was purely *endemic*, at last became *epidemic*, and the unfortunate enthusiast of inoculation was reduced to despair.

Finally, one never-to-be-forgotten evening, while the Doctor and myself were closeted together in the sacred recesses of my most private boudoir (garnished with the usual accompaniments) he, my friend, Dr. Wilson, broke the Sabbath stillness of the surrounding air by exclaiming, "Billy, for God's sake what is to be done? You will have to write a text-book, a kind of *vade mecum*, paying particular attention to the disease which I, alas! have so vainly endeavored to combat. Then everyone can have the disease all to themselves, and *stick to it*."

And this, gentlemen, is the story of "The Habitant."

In the analysis of everything that is human, the medical man is indeed a *specialist;* therefore, if in painting types, in delineating human weaknesses, passions, and foibles, I have gained your applause, I am more than satisfied that my work has at least been *fairly* well done."

After Dr. Drummond's speech, a very pleasant time was spent, contributions in the shape of song, speech or story being furnished by each one present. It is impossible to refer to these in detail, yet it will not be invidious to single out two or three for special mention. Dr. Wilson's recitations of selections from "The Habitant" were a great treat. They were rendered in a most sympathetic spirit and with rare artistic finish. There is no doubt, as the Chairman stated, that a considerable proportion of the interest which has been taken in Dr. Drummond's poems, in Montreal at least, has resulted from Dr. Wilson's masterly presentation of them during the past few years.

Dr. Drummond's reading for the first time of a new poem entitled "*Phil-O-Rum's Canoe*," was listened to with keen interest.

Another feature of the evening was Dr. Craik's closing speech, which focused the attention of all present. In a few well chosen sentences, the Dean spoke weighty words of wisdom regarding the importance of literary studies to the medical man, who, too often, owing to the pressure of his work, allowed his mind to be cramped within the purely professional limits of his life. He urged upon his hearers the value of continual attention to "Belles Lettres," not merely as a pleasant recreation in itself, but also as a means of opening new avenues of interest, of keeping the mind in a sympathetic attitude towards the whole world of thought—in a word, of enabling them to attain the highest ideal of the cultured physician.

We congratulate Dr. Drummond on the success of the supper given in his honor; still more on the triumphal progress which his book has made.

We doubt if any poet has ever known ten thousand copies of his first volume to be bought by a ravenous public within a few weeks of publication. Yet this has been Dr. Drummond's good fortune.

We do not know what his future literary ventures may be, but we feel sure that they will be worthy of the man,—worthy of his first success. Modern literature has too many examples of men who having achieved fame by their early strenuous labours, thereafter pour forth their drivelling, slovenly stuff upon the credulous public.

It is some satisfaction, however, to know that such per-

sons sooner or later find their Gehenna, though too often with the spoils of unrighteous mammon, which they have gathered in their downward course.

We trust also that Dr. Drummond, having proved himself a master in delineating various types of French-Canadian character in the well-known patois of the *habitant*, will soon cultivate the muse in pure rich mother English.

Dr. Drummond's work is an evidence of his exquisite cultured poetic faculty.

It is not too much to expect that, following Kipling's example, in having first achieved a reputation as a truthful and sympathetic painter of the scenes and types familiar to him from early days, he may wander far afield in fancy's realms, achieving for himself a splendid reputation as one of the great imperial singers of our race.

PROVINCIAL MATRICULATION EXAMINATION.

Dr. Belleau, Secretary of the College of Physicians and Surgeons, has received the following bill from Major Pinault, M.P.P., sanctioned Saturday last, and we have to thank him for forwarding us a copy. It is very important to medical students :—" An Act to amend the law respecting admission to the practice of medicine in certain cases. Whereas there are at present in the Universities of this Province nearly two hundred students who have commenced attending the medical course before having obtained a certificate of admission to the study of medicine ; whereas the fact of their not having been regularly admitted to the study of medicine exposes them to lose the benefit of several years of medical studies ; therefore Her Majesty, by and with the advice and consent of the Legislature of Quebec, enacts as follows :—1. Notwithstanding article 3,978 of the Revised Statutes, the College of Physicians and Surgeons of the Province of Quebec is authorized to admit to practice the medical students who, on the first of November, 1896, had commenced attending the medical course in a duly incorporated University of the Province of Quebec, before having obtained a certificate of admission to the study of medicine, and to grant them the necessary license to practice medicine, surgery and obstetrics in the Province after having passed the examinations required for admission to study and those required for admission to practice. 2. This Act shall come into force on the day of its sanction."

PUBLISHERS DEPARTMENT.

CONTINUED GOOD RESULTS.

The January 1894 number of *The Quarterly Journal of Inebriety* published under the auspices of the American Association for the Study and Cure of Inebriates, Hartford, Conn., U.S.A., says through its able editor, T. D. Crothers, A.M., M.D.—"Antikamnia is one of the best remedies in influenza, and in many instances is very valuable as a mild narcotic in neuralgias from alcohol and opium excesses. We have used it with best results." In a letter of more recent date to the Antikamnia Chemical Company, Dr. Crothers writes: "Antikamnia continues to improve in value and usefulness, and we are using it freely." *The Edingburgh Medical Journal*—Scotland—says, regarding antikamnia: "In doses of three to ten grains, it appears to act as a speedy and effective antipyretic and analgesic." *The Medical Annual*, London, Eng., says: "Our attention was first called to this analgesic by an American physician who we saw in consultation regarding one of his patients who suffered from locomotor ataxia. He told us that nothing had relieved the lightning pains so well as antikamania, which at that time was practically unknown in England. We have since used it repeatedly for the purpose of removing pain, with most satisfactory results. The average dose is only five grains, which may be repeated without fear of unpleasant symptoms."

The Living Age issues for January show that the spirit of its founder still lives; but they show more. Their contents are gleaned from a wider field, and there is an up-to-dateness in the articles which evidence renewed life and vigor. The recent enlargement of the magazine, the addition of new departments, the widening of its scope by the introduction of translations from prominent Continental authors on topics of present interest, and the presentation of American literature, are evidences of enterprise that will be appreciated by its readers, and furnish what was needed to make *The Living Age* a complete compendium of the world's best current literature.

Space will allow for the enumeration of a few only of the many papers presented in the January numbers. These include "Brunetiere's Impressions of America," from the *Revue des Deux Mondes;* "The Unrest of the Nations," from the *Spectator;* "Modern Education," by Prof. J. P. Mahaffy; "Ramozan," by Hugh Clifford; "Blackwoodiana," by Herbert Maxwell; The Dual and Triple Alliance and Great Britain," by Francis de Pressense; "Henrich Heine: A Centenary Retrospect," by Edward Dowden; "Women at Oxford and Cambridge," from the *Quarterly Review;* "Some Reminiscences of Thomas Henry Huxley," by St. George Mivart; "The Evolution of the Idea of God," by Andrew Lang; "Black and White Rights in Africa," by H. R. Fox Bourne; "The Farm and the City," by Walter Besant; "Scandinavian Literature," by David Anderson, and "The New Learning," by Herbert Paul. Fiction includes an instalment in each number of the serial "With All Her Heart," from the French of Réné Bazin; "Louey," a touching story of self-sacrifice; "A Simple Story," by Mme. Marguerite Poradowzka, adapted for *The Living Age*, and several short stories. The Poetry is also worthy of mention, notably "Old Lovers," by E. Nesbit, and "In the Twilight," by E. S. S. W.

The publisher's offer of the eight numbers of 1897, containing the opening chapters of the serial "With All Her Heart," free to all new subscribers for the year 1898, still holds good. Send $6.00 to The Living Age Co., Boston, and receive the benefit of this offer. In no other way can so much reading matter of equal quality and variety be obtained.

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CANADA
MEDICAL RECORD

FEBRUARY, 1898.

Original Communications.

REPORT OF TWO CASES IN WHICH A FIBROID TUMOR WAS EXPELLED FROM THE UTERUS AFTER ELECTRICAL TREATMENT.*

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. Eng.

Prof. of Clinical Gynæcology in Bishop's University; Surgeon in Chief of the Samaritan Hospital for Women; Surgeon to the Western Hospital and Gynæcologist to the Montreal Dispensary, Montreal, Canada.

The specimen which is now shown is about the size of a large orange and weighs about one pound, and consists of solid fibrous tissue. It was removed from a patient in my private hospital about two weeks ago. The following is a brief history of the case.

Miss X., 31 years of age, was referred to me by Dr. Sinclair of Gananoque for electrical treatment for fibroid tumor of uterus, which was causing such profuse hemorrhages that the patient was hardly able to go about. She had begun to menstruate at twelve, and had always suffered at her periods, so much so that she would cry and sometimes faint with pain. Her nervous system was completely broken down so that she had become very hysterical. During the last two years her abdomen had visibly increased in size. Her bowels were regular, but her appetite and digestion were very poor. She had had typhoid, rheumatic and malarial fever at different times. During the last year she had been under the best of treatment in Toronto without much benefit, and as a last resource the leading gynæcologist there recommended the removal of the tubes and ovaries in order to check

* Read before Medico Chirurgical Society, Montreal, 18 Feb., 1898.

the hemorrhage and the growth of the tumor. This she would not consent to on account of the dread of the operation. Her physician then sent her to me. On examination a hard mass about the size of a fœtal head was felt in the anterior wall of the uterus, and the tubes and ovaries were tender to the touch. Before undertaking the electrical treatment I fully explained to her that it was tedious and troublesome, and would require two or three months stay in the city, and although it was pretty certain to arrest the flow, having done so in more than sixty cases, it was by no means certain to make the tumor disappear. On the other hand, I told her I could remove the uterus with the tumor in half an hour, and if she recovered that would be the end of it. She insisted upon the electricity, which was accordingly begun on the 18th December. From that date until the 18th January, she had about forty applications, a considerable portion of the time being lost by the periods and by two weeks absence at Christmas.

By this time the amount of the flow was reduced to normal; she had quite a rosy complexion and a splendid appetite, better than she had ever had in her life. The headaches which she had had almost constantly before left her entirely from the first treatment. Also the backache, which had been severe before, completely disappeared. She and her friends were satisfied with the result, and I would have allowed her to go home but she suggested that I should first curette her, as I had suggested this as one of the alternative treatments instead of electricity. Thinking that this would make her cure more certain I agreed to do it, and she entered my private hospital for the purpose. While curetting under anæsthesia I discovered that the sound could be passed in a distance of seven inches by passing it in a certain direction instead of four and a half inches, to which distance it had generally entered while using electricity. Iodine and carbolic were thoroughly applied, and the cavity was packed with iodoform gauze. As she was to go home in a few days she wished for one more application of the galvanic current, and this I gave her with the sound six inches in the uterus. Next day severe bearing down pains set in, and the patient became very hysterical and nervous. She could not tolerate opium

or morphine. A few days later there was complete blocking of the pelvis, her water having to be drawn with the catheter, and it being impossible to move her bowels even by enema. She became very distended and vomited a good deal. On examination on the 4th of February, the os was still long and narrow and closed, but after many severe labor pains and pains in the back like those of the first stage of labor, she was examined again on the 5th, the next day, when the vagina was found to be tightly plugged or filled with a hard mass the size of a full time fœtal head; the cervix could not be reached. As the obstructive symptoms were urgent, she was on the sixth anæsthetized, and with the help of Dr. Sinclair of Gananoque and Dr. Field of Montreal, the ecraseur wire was passed around it as high as possible, but although of Delta metal, it broke, wounding my fingers in several places. Another and more successful attempt was made in getting the wire farther back, with the result that its connection with the uterine wall was severed, and it was delivered by strong tractions as one would deliver the fœtal head with forceps. As the patient was a virgin it was impossible to avoid a laceration of the perineum, which was, however, at once repaired. In the meantime the contractions of the uterus had caused gangrene of the lower end of the tumor, and this probably became infected from the vagina, for her temperature gradually rose to 104, but was brought down somewhat by quinine, and a few days later it returned to normal. That the discharge from the uterus was very acrid, was evidenced by the fact that three of the little wounds on my hands suppurated and the patient's thighs were much excoriated. The patient is now convalescent and is up every day and will soon be going home with her abdomen flat and her uterus reduced to normal size.

Case II. was a patient about thirty years of age, married but sterile, from Holyoke, Mass., who had a fibroid the size of a fœtal head in the posterior wall of the uterus. She was having very severe hemorrhages. She received ten applications, at the end of which time she had a period which only lasted three days, and was otherwise so natural that she believed herself cured and insisted upon going home, as she felt so well. She had been able to take in several inches in her

belt. While on the train, and about half way home, she was suddenly taken with labor pains and a rather free hemorrhage. The pains were described as of a tearing character. In about a half an hour the tumor came away entire. I am sorry that I am unable to show this specimen although I went down to Holyoke to get it, and saw it completely filling a quart fruit jar. She would not part with it unless at a fabulous price.

In Albutt and Playfair's recent work on Gynæcology, page 327, the following words appear: "It is well recognized, of course, that the continuous current has a marked effect in producing powerful contractions of the uterus. This can be demonstrated experimentally; and it is also shown clinically by the considerable number of intra-uterine fibroids which have been expelled during electrical treatment, in some cases after a very few applications. It is further quite probable that we must look to this contraction-producing effect for an explanation not only of the hemostatic results, but also of the alteration of nutrition and consequent diminution in size which not infrequently result from electrical treatment."

I might add, as bearing out this opinion, that case No. I. would invariably experience strong contractions of the bladder whenever the current was continued longer than five or six minutes.

I thought it worth while to report these two cases of absolute cure, in addition to the many I have reported of women with fibroids having been restored to health by the electrical treatment, because it is no more than right that women with bleeding fibroids should have the choice of this alternative with all its faults, if they wish it, rather than take the heavy risk of absolute and speedy cure by the knife. And I feel the more free to say this because personally I much prefer the latter method, while the treatment by electricity is exceedingly irksome to me when I am so pressed for time.

But four of the fourteen women upon whom I performed abdominal hysterectomy are dead, while all of the sixty and odd whom I treated by electricity are still alive—a few of them, it is true, no better, but the majority of them in perfect health.

250 Bishop St., Montreal.

Montreal General Hospital.

EXOPHTHALMIC GOITRE.

Clinical Lecture by F. W. CAMPBELL, M.A., M.D., L.R.C.P.L., D.C.L.,
Professor of Medicine in the University of Bishop's College.

GENTLEMEN,—The patient now before you is a young girl, employed in a factory, of the age of about nineteen years. Her mother, who is with her, says she has enjoyed fair health, eating and sleeping fairly well. She first noticed protuberance of the eyeballs about three months ago, and soon after enlargement of the thyroid. This was followed by nocturnal restlessness and palpitation on the least exertion. It is about six weeks since she was first brought to the clinic. Her general condition then was as follows: marked protuberance of the eyeballs—well defined enlargement of the thyroid—no cardiac murmur—sounds normal, except that the second is markedly accentuated—pulse 140—tongue clean but trembles on protrusion, and trembling of the hands was very marked. She was placed upon tincture of the muriate of iron with tincture of digitalis and enforced rest, either on bed or sofa. To-day, while I cannot say that the eyeballs are less prominent, or the thyroid diminished, still there is a marked improvement in her general condition, and I have the hope that in time she will completely recover. As the disease is not common, I have thought that having a case to illustrate it, it might be to our advantage to give a brief survey of it, as recorded by the latest authorities.

It was not till the second quarter of the present century that the attention of the profession was drawn to cases of cardiac palpitation, with an enlarged thyroid and staring eyeballs. In 1835, Dr. Graves, of Dublin, wrote on the subject, and it is still by many called Graves' disease. As a rule it sets in very gradually, and no definite cause can be assigned for it. It has been known to follow mental shock. Trousseau records a case of this kind, where a lady, who had lost her father, cried all night. She suddenly felt her eyes swell and lift up her eyelids, at the same time she had profuse nasal

hæmorrhage. violent palpitation of the heart, throbbing and enlargement of the thyroid. The case was diagnosed as one of exophthalmic goitre. Men are seldom attacked by it. It is chiefly met with in young women about the age of twenty to thirty years, and is sometimes met with in several persons in the same family. Persons who are anæmic or chlorotic are especially liable to it, as are also hysterical and neurotic subjects.

Symptoms.—Increased action of the heart is first noticed. At first and for a time this may only be occasional, but it soon becomes constant. The pulse rate varies from 120 to even 200 per minute. The cardiac impulse is exaggerated, the sounds loud and ringing, and not infrequently a blowing systolic murmur is heard at the base or apex. The area of cardiac dullness is not increased. The carotids throb, and with the hand a pulsation or thrill is felt in the thyroid. The pulse in the radials is not unusually forcible. Swelling of the thyroid may not come on for some little time, or it may appear simultaneously with the increased cardiac action. The enlargement may be symmetrical or it may be only one side, and then generally the right. It generally is not excessively enlarged, though cases are recorded where it has caused inconvenience by pressing on the trachea. The third cardinal symptom is prominence of the eyeballs, which varies greatly in degree. In some cases the stare is only a little more than is natural, in others it gives a fierce and savage expression Cases of great prominence are recorded, where the eyeballs have been forced so far forward as to expose the insertion of the recti muscles into the sclerotic. Trousseau records the most notable case on record, in which one of the eyes actually came so far out of the orbit that it had to be pushed back by the fingers. In moderate cases the eyeballs may be so prominent as to prevent the closing of the lids during sleep, resulting in inflammation of the cornea. Fatigue in using the eyes is at times complained of. The ophthalmoscope shows tortuous and dilated condition of the retinal veins. The cause of this prominence of the eyeballs is not settled, and has been attributed to turgescence of the vessels in the orbit or an overgrowth or swelling of the fat in the cavity. When death supervenes, the prominence of the eyeballs, as a

rule, disappears almost entirely. The other symptoms which have been noted are irritability of temper, insomnia, headache, impairment of memory, unfitness for employment, voracious appetite, flatulence, constipation, amenorrhœa, leucorrhœa, and epistaxis. Irregular febrile attacks sometimes occur in which the temperature rises 2 or 3 degrees F. The patient often becomes greatly emaciated. The spleen is at times enlarged.

Pathology.—This is obscure, and as there is not anything definitely known, it is of no practical importance to discuss the numerous theories which have been proposed. Everythiug which so far has been suggested as to the cause has proved so full of errors and impossibilities, that we are no further advanced in the pathology of the disease than we were when it was first brought to the notice of the profession.

Prognosis.—Upon the whole this is favorable, though deaths from it are recorded, but they are rare except in very severe cases. Its course is generally chronic, lasting several years. After persisting six months or a year, all the symptoms not infrequently gradually disappear.

Treatment.—Medicinal treatment is notoriously uncertain. A combination of the tincture of the muriate of iron with tincture of digitalis is advised when the patient is anæmic, and sometimes appears to do good. Aconite and veratrum viridi have been used, but the consensus of opinion is unfavorable. Some writers advise ergot in solution. Strophanthus has in somes cases reduced the action of the heart. Atropia in doses of $\frac{1}{120}$ or $\frac{1}{200}$ of a grain is advised to be given till its constitutional effect is produced. An ice bag to the cardiac region or at the nape of the neck, with complete rest in bed, has given relief. Osler says he has known this treatment reduce the pulse from 140 to 90. Electricity has been used, and cures from it are recorded. Use the galvanic current, placing the cathode at the back of the neck, and the anode along the course of the sympathetic or over the heart. Ligation of the arteries of the thyroid have been tried, but not with satisfactory results. Iodine has also been tried. To sum up, we have not any sure means of relief, and fortunately nature comes to our aid and relieves the patient after months of great discomfort.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

TO CURE ITCH IN TWO HOURS.

Employ fresh sulphuret of calcium, made as follows:

℞ Sulphur (flowers of).....3 ounces
Quicklime.....6 ounces
Water.....2 pints

Boil together till combined, then allow to cool and settle. Decant, and preserve in hermetically sealed bottles.

Rub patient all over with soft soap for half an hour, then place in a tepid water-bath for another half hour. Next rub over with the solution and allow it to dry on the skin for a quarter of an hour. Complete by washing in the bath.—HIEMINKX (Belgium.)—*Med. Age.*

CARDIAC NEUROSES.

At a recent meeting of the Italian Medical Society, a report of which is published in the *Independance Medicale* (*N. Y. Med. Rec.*), Dr. Silva stated that he had made a special study of paroxysmal tachycardia and bradycardia. The former, he said, was developed especially at maturity, without distinction as to sex, under the influence of great emotion or from excessive mental and physical exertion. It was manifested by sudden attacks, vertigo, buzzing in the ears, and contractions of the neck and of the epigastrium. The heart beats were accelerated, and the number sometimes reach 250 or even 300 pulsations. If the thoracic region was examined at the time of an attack, an undulatory trembling would be perceived near the cardiac region, and auscultation would reveal a fetal rhythm of the beats. The cardiac sounds were so accelerated that it was scarcely possible to distinguish the different periods. Sometimes, however, a systolic souffle could be perceived, which disappeared after an attack. The pulse was small and the face pale. In addition to the vertigo, there were delirium, insomnia and oliguria, but there was no fever. Mydriasis or myosis of the eyes was observed.

It was not possible, said Dr. Silva, to determine the cer-

tain cause of these attacks, which manifested themselves without any apparent cause and lasted from a few minutes to several hours. They became grave when they exceeded the latter duration and terminated then in death during an asystolic attack. More frequently the attack was terminated suddenly at the end of a few hours by polyuria and profuse sweating, when the patient recovered. Attacks of tachycardia might follow each other at intervals of a few days, or there might be very long respites.

The diagnosis, said Dr. Silva, was established by the abruptness of the paroxysms, which were not accompanied by sounds of organic lesions of the heart. This abruptness of the symptoms, which broke out and disappeared suddenly without leaving behind them any alteration in the general health, was also a guide to the clinician in distinguishing tachycardia from true endocarditis : and in angina pectoris arrhythmia, which was generally absent in tachycardia, was present.

Regarding the pathogency of this affection, Dr. Silva said that many theories had been advanced. According to certain authors, it was an excitation of the great sympathetic ; according to others, it was, on the contrary, an ephemeral paralysis of the pneumogastric nerve which caused the attack. Debove and Courtois Suffit thought it was a bulbar neurosis ; Frantzel thought it was an undiscovered lesion of the myocardium. The speaker thought that the beginning of the attack depended upon the pneumogastric nerve, and that later this attack was kept up by the poisons produced by the excessive work of the heart.

Regarding bradycardia or the slow pulse of Charcot, the author continued, this syndrome was manifested especially in old persons. The patient was attacked suddenly with malaise, the face became pale, and he fell to the ground in a condition of trembling and profuse sweating. The pulse slackened and did not reach more than from 7 to 10 beats, Soon the patient recovered consciousness himself, and all the alarming symptoms disappeared at the end of a few minutes. The attacks might break out without any apparent cause or after emotion, anger, etc. The patient might succumb after the first attack. More frequently the attacks occurred every two weeks or every month ; in the interval the patient, who might live many years, was very well.

Dr. Silva stated that the diagnosis of bradicardia was very easy and the prognosis very grave.

Charcot and Caracretti had thought it was a circulatory or functional anatomical lesion of innervation, but Dr. Silva thought, on the contrary, that brachycardia depended sometimes upon a lesion of the centre of the pneumogastric nerve,

sometimes upon arteriosclerosis, and at other times upon a lesion of the myocardium.

The two affections, he thought, should be treated in the same way—that is, with hydrotherapy, electricity, thoracic massage and climatic treatment.

SYPHILIS OF THE INTERNAL ORGANS.

Bourdieu (*Annals de Derm. et de Syph.; Jour. Cuta. and Gen. Urin. Dis.*) contribution to pulmonary syphilis related to a man in life showing asthmatic, bronchitic, and bronchiectatic symptoms. At autopsy there was found a thickening of the connective tissue skeleton of the lung everywhere, in addition to a generalized sclerogummatous change in all the tubes, with dilatation, to which the fibrosis was secondary. Diagnosis in such a case is made by the presence of other accidents, and the therapeutic test. The symptomatology is by no means characteristic.

Champenier sums up his investigations on neuritis as follows: It appears during the first six months of infection. The patient complains of pain and formication, which may be intense and persistent, with paroxysmal crises. There are motor disturbances as well, loss of power and atrophy, and diminution of electrical contractility. The cause is a peripheral, not a central lesion. In the absence of other causes, an osseous disease, exostosis, periostitis, may involve the nerve. Neuritis may be considered as an indication of malignant, precocious syphilis.

Burdury, writing on the cerebrobulba phenomena in association with medullary symptoms of syphilis, says that they may precede or follow spinal accidents; more often the former happens. The disturbances most frequently seen are those of the eye, paralysis, diplopia, hemianopsia, diminution of visual acuity. The third nerves are oftenest attacked, and the appearance of ocular paralysis is presumptive evidence of syphilis in a myelitis. Cerebral syphilis in congestive form comes next in importance; vertigo, fainting, transitory loss of speech and intelligence, possibly fleeting paralysis, epilepsy, aphasia, neuralgia, sensory disturbances. Without being able to give figures, Bardury believes that the phenomena occur in more than half the cases of spinal syphilis.

Schwab maintains that the prime cause of premature delivery in syphilis is disease of the placenta. All authors agree that it is pale, hypertrophied and edematous. Placental lesions accompany hereditary, fetal or congenital disease, except in a few postconceptional in origin, attacking fetal and maternal elements. The first lesion is an endoperiarteritis and an endoperiphlebitis. The vascular disease is constant

and results in perivascular infiltration and vessel obliteration. The stroma of the villi is altered and their epithelium proliferated or destroyed. Gumma is seldom seen. The changes are usually general, but may be localized with greater or less intensity in one part or another.

Hector has succeeded in gathering only 9 cases of tertiary epididymitis. It appears 2 to 20 years after infection, and in individuals in full sexual activity. Traumatism, gonorrhea, or previous inflammation determine its appearance. To be called tertiary, an epididymitis must exhibit: 1. Coexistence with other tertiary accidents; 2. rapid regression under iodid. One organ is attacked unusually in its entirety. It is moderately hard and painful, and nonadherent to the testicle. The duration may be long and the termination be in sclerosis.

Rochon reports two cases to show the virulence of spermatic fluid in syphilis. The first was a chancre of the subumblical region in a woman whose husband was in the habit of ejaculating extra genitally. The second occurred in a young woman whose lover transmitted syphilis to her, although he had no urethral lesion.

Stanziale describes two cases of gumma of the spleen. In one, the disease consisted in a solitary nodule; in the other, they were numerous, small, isolated and irregularly disseminated through the parenchyma. Some showed central caseation. The vessel walls had undergone amyloid degeneration in other parts of the organ than the gummata. The arteries of the splenic corpuscles showed a fibrous adventitia, a sign which may dfferentiate syphilitic from other splenopathies.

Rona remarks that bone fracture due to syphilis is of rare occurrence, and describes two cases in which the cause was gummatous osteomyelitis. The first had a benign attaek at first, and was scarcely treated at all. Later he developed a frontal periostitis and thickening of the clavicles, cured by inunction. Shortly after, fracture of the left bone followed an abrupt movement. Complete union resulted. The second showed cutaneous lesions, osteoperiostitis and myelitis, fracture of the humerus, acromion, and both bones of the forearm, and gummatous arthritis. Spontaneous amputation ensued. A third case is given in which the left leg was amputated spontaneously in hereditary disease. The stump healed without treatment.

Mosca gives the history of a similar condition, the fracture occurring at the juncture of the upper and middle thirds of the sternum. Complete repair followed treatment.

GUAIACOL IN CHRONIC COUGHS.

A. Goldhammer (*Medical Record*, October 23, 1897) claims to have had remarkable success with this drug in many cases of cough of long standing, in which no tuberculous element could be recognized. He was first led to the employment of this remedy in a case in which the cough had existed for two years and numerous other drugs had been used without avail. Under the use of guaiacol daily for one month the cough disappeared, and the patient has been entirely free from it ever since—a period of ten months. Since then he has used guaiacol in every case of cough of more than two weeks' duration, irrespective of origin. He has found it of decided value in cases of chronic bronchitis with or without asthma. In the chronic coughs of children guaiacol has proved especially beneficial. He has employed it even in several cases of whooping-cough with excellent results. The paroxysms were rendered less severe and less numerous, and the duration of the attack was cut short to two or three weeks. For children of a delicate temperament, who have a poor appetite and who occasionally have a slight cough, guaiacol is a valuable remedy. It stops the cough entirely in a short time, increases the appetite, and causes the patient to gain in flesh. It is his opinion that many a case of incipient tuberculosis could be prevented, if every old cough, no matter how slight, were treated by the administration of guaiacol. In acute coughs guaiacol does not act beneficially and should not be employed.

The author has recorded thirty cases of cough of varied origin and description, in which no distinct tuberculous element could be recognized, and in which he employed guaiacol as a remedy. In twenty-six of these cases the cough disappeared entirely after the drug was used for periods of from two to six weeks. In the four remaining cases the cough was decidedly improved, although not entirely cured. Eighteen of these cases were in children under ten years; nine were in adults, three of whom were over sixty-five years of age. The article is accompanied by the history of five cases.—*Medicine.*

THE USE OF DIGITALIS IN AORTIC INCOMPETENCY.

That property of some minds which causes them to extend particular experiences into general conclusions has led to much difference of opinion as to the *rôle* of digitalis in the

treatment of aortic regurgitation. The tyro who discovers that a patient consulting him for some reason, has an aortic regurgitant bruit, and forthwith prescribes digitalis, need not be surprised if in a day or two his patient is seriously ill with the evidences of an embarrassed circulation. Even the patient who evinces aortic incompetency with lost ventricular compensation may after a few doses of digitalis find his condition considerably aggravated. On the other hand the agent which has proved so disastrous under the circumstances narrated may prove unquestionably beneficial in cases showing the same valvular lesion. Setting aside individual peculiarity as an incalculable factor when discussing therapeutic agents, it is desirable to arrive at some explanation of the seeming inconsistency in the action of digitalis in these cases.

In his recently published work on *Heart Disease* (p. 161), Sir William Broadbent remarks that when the preponderant character of the symptoms in aortic inadequacy is that of venous obstruction, and with aortic physical signs there are mitral symptoms, digitalis is frequently beneficial and justifies the statements of those who find this remedy of the same service in aortic as in mitral disease. "In the absence of mitral symptoms, it is rarely," he adds, "that digitalis is called for in aortic incompetence or is of service, and it may undoubtedly do harm." There is of course nothing novel in this conclusion, as the same distinction has been pointed out before, but it is satisfactory to chronicle the decision on a moot point, of one who has had much practical experience in cardiotherapy. Digitalis, in other words, to be of use in aortic incompetency, requires not only the evidences of lost ventricular compensation, but of compensation lost to such an extent that dilatation of the ventricle and its impotent contraction permits of mitral reflux. It is in the addition of the aspirative to the propulsive difficulty, that the factor indicating the employment of digitalis in aortic inadequacy consists. —*Treatment.*

THE TREATMENT OF EXOPHTHALMIC GOITRE.

One of the indirect consequences of the comparatively satisfactory explanation and altogether satisfactory treatment of myxœdema seems to have been to invest with additional investigative interest other disturbances in which the thyroid gland plays a part. The occasional success which has attended removal of that organ in Graves's disease appears to indicate that in many, if not all cases, disturbance of secretion in it lies at the bottom of the manifested clinical phenomena. Ablation, partial or complete, has, however, proved sufficiently often fatal to cause surgeons to enquire whether

there be not some safer method of diminishing the exaggerated secretory activity of the organ. Among these, various forms of section of the cervical sympathetic have been advocated and practised. In the *Lyon Médical* for October 31st, 1897, M. Jaboulay claims that to him exclusively belongs the credit of having shown that paralysis of the fibres of the cervical sympathetic ameliorates the symptoms in exophthalmic goitre. He mentions some particulars of the usual cutting, tearing, wrenching and squeezing methods which have been practised by surgeons in this region of the body. A ganglion more or less cleared out seems to be all in the day's work, and then the operator seems to adopt a sagacious Micawber-like attitude and waits for something to turn up. It does, I suppose, sometimes, but it seems also to be necessary to enter a word of caution when these heroic methods are in the air. In the first place, what does the surgeon aim at beyond the broad fact of reducing somehow the complex of systems constituting the disease? Does he expect to diminish the glandular activity of the thyroid? If so, how does he know that the sympathetic is the chief secretory nerve involved? That it may to a certain extent have such a function may from analogy with other glands be admitted; but that it is the chief secretory nerve may as certainly be denied. The secretory nerve of the thyroid gland is in all probability the pneumogastric, and if nerve section for this purpose is to be practised, it would seem that the sooner the surgeon pays attention to the thyroid branches of the pneumogastric the better, always supposing that the manipulations involved do not so disturb the main trunk as to cause—well, an inconvenient duration of cardiac inhibition. If on the other hand his object be to quiet the tachycardiac heart, it would seem a pity that the patient should have to part with so much of his indispensable nervous system to secure that end. If, finally, he aims at the removal of exophthalmos, inasmuch as the sympathetic is essential to vaso-constriction, it would seem unfortunate that he should give a free hand to vaso-dilators and over-secretors by destroying the sympathetic. If there be any cogency in these comments it would appear advisable, in the mean time, that the surgeon and the physician alike should restrict their endeavors to diminishing, if possible, and by less heroic means, the secretory activity of the gland. I have known the electrical treatment of the thyroid (galvano-puncture) shrivel a large pland causing respiratory difficulty, to a mere nodule, and belladonna, from the days of Begbie till now, has apparently been capable at times of diminishing thyroid secretion just as it does that of the salivary and pharyngeal glands.—*Treatment.*

A THEORY OF ACTIVE AND PASSIVE IMMUNITY FROM THE BACTERIA OF CHOLERA, TYPHOID FEVER, AND THE LIKE.

The various theories of immunity have been occupying the periodical medical press extensively for several years. They bid fair to be settled soon on experimental lines. We reproduce the conclusions of Max Gruber, of Vienna, which have been communicated to *The Lancet* of October 9, 1897, by H. E. Durham. Both of these investigators have been employed upon this work for the past eighteen months.

1. A high degree of long persisting immunity can be obtained by means of intraperitoneal injections (in guinea-pigs) of microbes killed either by chloroform or by exposure to a temperature of 60 ° C. Such killed cultures of cholera, and other vibrios, of typhoid, and coli bacilli, etc., have little or no poisonous properties; the guinea-pigs show trifling symptoms in the course of treatment; they recover rapidly, even when such large doses as 0.5 gramme per one kilogramme are eventually exhibited. The only constant symptoms arising from these injections are to be attributed to the peritonitis, which is caused by the proteins of the bacteria. It follows from these facts that the dead bodies of the bacteria are not poisonous in themselves; and, furthermore, that the immunizing constituents of the bacteria are not identical with the bacterial toxins.

2. The animals, when immunized by this method against the above-named bacteria, are truly infection proof, but they are by no means toxin proof. At the present time we are not dealing with toxin proof immunity, and we are far from saying that animals cannot be rendered proof against the toxins of the above-named bacteria by the use of suitable methods.

3. The destruction of the bacteria takes place through the medium of the juices in actively immunized animals as well as in animals which are protected passively by means of the serums of immunized animals. This fact has been correctly observed and emphasized by Pfeiffer. The (polynuclear) phagocytes only play a secondary and comparatively unimportant part in the process.

4. Protective or antagonistic substances (antikorper) are always present in the blood and juices of the immunized animals. They are already formed, and are not suddenly produced at the moment that a further inoculation is given, as has been asserted.

5. Both in actively and in passively immunized animals these substances (antikorper) react directly upon the

bacteria, whether the contact occurs within the body or *in vitro*. There is no evidence that they undergo any changes or transformations in conjunction with the normal juices when animals are protected passively by their aid.

6. These protective substances are the characteristic constituents of the blood and juices of immunized animals. They are not capable of actually killing the bacteria by themselves.

7. The actual destruction of the bacteria is effected in all animals, whether actively or passively immunized, by means of the alexins of Buchner. These alexins are general protective substances entirely without specific action; they are universally present in all animals. Phagocytosis only takes a secondary share in the destruction.

8. The essential action of the protective substances of the blood and juices of immunized animals consists in making the bacterial cell walls adhesive. This is shown by the fact that the bacteria become sticky when treated by these juices; in consequence, they adhere together in clumps and lose their motility. This fundamental phenomenon in the action of protective sera has been entirely overlooked by Pfeiffer and his pupils; it has been seen by Metchnikoff and Bordet, but they have neither recognized its importance nor its true meaning. On account of this fundamental action it is proposed to call the specific antagonistic substances of immunized animals "agglutinins."

9. The agglutinins act upon the sheaths of the bacteria and make them more penetrable. The alexins are enabled thereby to reach the bacterial protoplasm and to destroy it—in other words, to kill the bacteria. This process takes place quite indifferently inside the living animal or *in vitro*, the only condition necessary being that both agglutinins and alexins are present.

10. The agglutinins are used up during the process, perhaps by chemical combination or perhaps by actual destruction. It therefore follows that the extent of action of the juices of an immunized animal is directly proportional to the amount used.

11. Active immunity never occurs without evidence of the presence of agglutinins.

12. Active and passive immunity are identical in nature. Both forms of immunity depend upon the presence of agglutinins.

13. It has been asserted that active immunity persists even after complete disappearance of the protective substances—that is to say, after the tissue juices have lost the power of conferring a specific passive immunity. This in reality is only the expression of the fact that the degree of

concentration of the agglutinins gradually diminishes as time goes on; eventually the proportion of agglutinins present is insufficient to be effective in producing passive immunity.

14. He has been able to prove the presence of agglutinins thirteen months after the last immunizing injection. How much longer they persist he is unable to say, as at present he has not any animals which have been kept a longer time since their last treatment.

15. Agglutinins are specifically different. Each kind of bacterium has its own kind of agglutinin.

16. The influence of these specific agglutinins is, however, not limited specifically; it shows gradations in intensity of reaction, the maximum intensity of action being manifest upon its own kind. On other species the action is the more intense the more closely allied the microbe is to that by means of which the agglutinin was prepared.

17. Pfeiffer's assertion that an absolute specificity exists in the action of protective sera is not in accordance with, or supported by, observed facts.

18. The agglutinins are without doubt derived from certain constituents of the bacteria themselves (specific proteins?). They are produced only in the bodies of actively immunized animals, probably by combination with some constituents of the animal body. The site of production is perhaps in the macrophages; these cells ingest and destroy the polynuclear leucocytes which are laden with bacterial products.

19. The above conclusions are drawn from experiments with the microbes of cholera and allied vibrios of typhoid fever, and the like. In diphtheria and tetanus other factors are probably present.—*Medicine.*

ICHTHYOL IN THE TREATMENT OF AFFECTIONS OF THE RESPIRATORY ORGANS

Le Tanneur (*Journal de Médicine de Paris*, Oct. 17, 1897) has employed this remedy extensively in a variety of affections, and has found it especially useful in the treatment of pulmonary tuberculosis, dry and purulent catarrh of the bronchi, and also dilatation of the bronchi with profuse fetid expectoration.

The only form in which the drug is acceptable to the stomach is capsules, which should be surrounded by gluten envelope in the hope that they will pass through the stomach and be absorbed from the intestine. Each capsule should contain 0.25 centigrammes. Most of his patients received from eight to twelve capsules per day. He did not notice

any disturbance of digestion, though some patients continued to take this dose for a period extending over fourteen months.

In the treatment of bronchial catarrh Le Tanneur found that it made the secretion more fluid, and that it was consequently expelled with a less degree of effort. He also noticed a revulsive effect, a decrease of the congestion, and a return of the bronchioles to their normal size. An antiseptic effect was also noted which diminished the absorption of toxins and consequently lessened the systemic infection. Especially in that form of catarrh accompanied by dilatation of the bronchioles he noted a very rapid improvement in all the symptoms, and he regards the action of the drug in these cases as quite as efficient as it is in tuberculosis.—*Medicine.*

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.,

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospital.

IMPERFECTIONS IN INTRA-ABDOMINAL DIAGNOSIS.

By BYRON B. DAVIS, A. B., M. D.

Dr. Davis enters a plea for more accurate diagnosis before abdominal operation, on the ground that valuable time is gained by being better prepared to do the operation rapidly. To diagnose accurately no point should be lost by omitting to investigate in every way possible, whether it be by the aid of physical examination, chemistry, the microscope, or other instruments of precision, or by sifting carefully the history of the patient for years before. He cites a case of a woman dying from ruptured tubal pregnancy who was seen by three prominent gynæcologists who had no suspicion of the real condition for the reason that they were unable to obtain a proper history. As to gall bladder surgery he speaks as follows: "It is yet no uncommon thing to explore for stones in the gall bladder or ducts, and find disease of the hepatic flexure of the colon or cancer of the pylorus, and sometimes to find nothing at all. An abnormally long transverse colon, as pointed out by McGraw, doubtless figures frequently in these cases. As he states, if the transverse colon is too long it must bend up or down; it cannot bend up, therefore it bends down at the middle, assuming a V-shape. When fæces accumulate at the point of the V, the bowel becomes heavy enough to put the hepatico-duodenal ligament upon the stretch and twist it suffi-

ciently to acclude the common duct, and symptoms analogous to those of gall-stone obstruction. McGraw shows that when doubt exists, if the knee-elbow position relieves pain, the symptoms are due to an abnormally long transverse colon and not to disease within the gall ducts."

As a moveable kidney or retro placed uterus are often due to a general ptosis of the abdominal viscera, operation to anchor these in proper place has failed to relieve symptoms as a usual result.

A SERIES OF SIXTY-SIX OPERATIONS UPON THE KIDNEY.

ALBARAN (*Rev. de Chir.*, November 10, 1896) reported a series of sixty-six operations upon the kidney to the French Surgical Congress, with a mortality of only 9 per cent., or six deaths.

The operations were the following: seven nephrectomies with one death; one partial nephrectomy, no death; twenty-four nephrotomies, two deaths; five nephrolithotomies, two deaths; anuria, operation on tenth day, death; twenty-three nephrorrhaphies, no deaths; four exploratory nephrotomies, no deaths.

The author observed after a number of his operations reflex phenomena of a very grave nature, always accompanied by an oliguria of more or less marked character. The most marked symptoms were incoercible vomiting, with marked epigastric pain, or the lumbar regions became painful subjectively and on pressure; the patient was pale, anxious, with contracted pupils, small, rapid pulse, and a temperature about normal. These symptoms cease at the end of from twenty-four to thirty-six hours, or, on the other hand, they may continue without any interruption and despite the intravenous injection of artificial serum. In two cases of movable kidney these symptoms persisted for two and three days, and after great anxiety had been caused by the patient's condition all the symptoms ameliorated and disappeared upon the ingestion of hot grog. The author observed death occur in a case of nephrotomy and one of nephrolithotomy on the third day; the autopsy, however, failed to reveal the cause of the deaths.—*American Journal of Med. Sciences*, May, 1, 1897.

THE STERILIZATION OF HYPODERMATIC SYRINGES BY BOILING.

HOFMEISTER (*Cent. für Chir.*, July 4, 1896) details a method which he has found successful for the sterilization of hypodermatic syringes by boiling. It is based upon the fact,

which he discovered, that ordinary leather which has lain for twenty-four hours in a 2 to 4 per cent. solution of formalin can be boiled without losing its strength, softness, and suppleness.

This method can be applied only to such syringes as are made of metal, glass, and leather, and are not cemented but screwed together.

The cap and piston are moved and freed from oil by the use of ether. They are then placed for from twenty-four to forty-eight hours in a 2 to 4 per cent. solution of formalin. After a thorough washing to free them from the formalin they are ready for boiling.

In boiling care should be taken to expel all the air from the syringe by holding it under water and moving the piston in and out. It should then be placed in cold water to prevent the glass from cracking, and gradually brought to the boiling-point.

The formalin solution should be employed from time to time, but is not necessary every time the syringe is boiled.

If the piston fits properly after the oil has heen removed, it will fit after the boiling.—*American Journal of Medical Sciences*, May, 1, 1897.

ABSENCE OF UTERUS AND OVARIES.

Dr. R. D. Garcin, of Richmond, Va., reports (*Charlotte Medical Journal*, May, 1897; *Medicine*, Oct., 1897) the case of a 20-year-old married nullipara who consulted him for amenorrhea. The patient had never menstruated, neither had there been any vicarious hemorrhage. After a careful examination of her general condition, and finding that she was not pregnant, but somewhat anemic, gave her a few general directions and a tonic suitable for her condition, with direction to report in a month. She presented herself with no improvement. A thorough examination resulted in finding neither uterus nor ovaries; the vagina was entirely absent. The urethra would in the undilated state admit the thumb and index finger easily. The husband stated that his wife had sexual appetite. After intercourse she complained for several days of irritable bladder and painful micturition, showing positively that he had intercourse through the urethra into the bladder.

URETHRO-RECTAL FISTULA.

Dr. James P. Tuttle, of New York, in a paper read before the American Association of Genito-Urinary Surgeons (*Boston Medical and Surgical Journal*, July 15, 1897; *Medicine*, Oct.,'97), laid down the following principles as underly-

ing successful treatment of these: (1) Remove all obstructions to the passage of urine or intestinal contents through their normal channels. This involves the treatment or removal of rectal or urethal stricture, polypi or other tumors, the overcoming of sphincteric spasm and obstruction at the anus. (2) Protect the parts from abnormal passage of urine or fecal matter and gas. (3) The therapeutic and surgical treatment of the fistulous tract itself. The application of stimulating agents or cauterization should be patiently tried before resorting to more radical measures. He cites three illustrative cases. In one the fistula opened into the rectum about half an inch above the external sphincter, and was large enough to admit the end of the index finger. The urethral floor was absent to a considerable extent and required to be rebuilt. There was much connective tissue around the opening and a stricture of the membranous urethra anterior to the fistula. After several days' sterilization and treatment of the urethro-intestinal tract Dr. Tuttle incised the sphincter thoroughly and cut away the cicatricial tissue with scissors, thus freshening the fistula edges at both ends. The intestinal wall was then dissected from its anterior attachment up to a point three-fourths of an inch above the fistula and half an inch to each side. The urethral stricture was then dealt with by perineal section, the incision being carried backward into the fistulous opening. A flap was then dissected from the soft tissues at either side of the urethra large enough to replace that portion of the floor which had been destroyed. These were sewed together with catgut sutures over a full-sized sound introduced through the meatus, in order that the caliber of the canal might be accurately re-established and no pocket left. The fistula being thus closed the sound was withdrawn and the fresh perineal wound and anterior incision in the urethra left unsutured. The edges of the intestine were then sewed together with chromicized catgut and the rectum packed with iodoform gauze, a drainage tube having been introduced into the bladder through the meatus and fastened there. It seemed to cause no inconvenience and was left in for eighteen days, the bladder and perineal wound being irrigated daily with Thiersch's solution. The perineal incision was loosely packed with absorbed gauze and dressed with an ordinary T-bandage. Convalescence was uneventful, the perineal wound healing in about six weeks. The patient left the hospital perfectly well three months after.

Two other cases are reported by Dr. Tuttle in which the operation proved successful.

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

THE EARLY SYMPTOMS OF PUERPERAL INFECTION.

Ferré (*L'Obstétrique*, ii, No. 5, p. 425, September 15th, 1897) points out that the general notion of the sudden onset of marked symptoms of puerperal infection after a longer and shorter period of silent incubation is inexact. Even in the period of incubation important, although attenuated, symptoms may be present, and their recognition will greatly conduce to successful treatment. These early symptoms are: slight elevations of temperature occurring once (or twice) daily, and usually in the evening; a pulse rate of 80 or more, especially if in the morning, when the temperature is not yet raised; relative or absolute insomnia, which is a very important indication of serious infection and requires careful inquiry; headache, at first intermittent and slight, usually always in association with the other symptoms mentioned; sometimes diminution or suppression of the lochial discharge, although as a rule this is a later manifestation: and, finally, vague impressions of cold, but not usually a distinct rigor. The later symptoms, such as marked rigors, high temperature, local pain, etc., are well known; it is to the recognition of the early symptoms that we must trust for the successful treatment of such cases.

VOMITING OF PREGNANCY.

W. S. Gordon suggests the theory that the nausea and vomiting of pregnancy may be due to impoverishment of the maternal nervous system by the withdrawal of phosphorus for the growth of the uterus and its contents. To substantiate this belief he cites the fact that nausea is most intense in the mornings when the mother has been longest without food, and is relieved by the morning meal; that it is most severe in the first half of the pregnancy, when the fetal development is most rapid, and that there is a diminished elimination of phosphorus by the kidneys. The treatment indicated by this hypothesis includes careful attention to the digestive organs, persistent or forced feeding, and the administration of phosphorus in the form of hypophosphite of calcium and sodium with bromides or other nerve sedatives.—*Amer. Jour. Obstet.*

PLACENTA PRÆVIA THE RESULT OF UTERINE FIBROID.

Maygrier (Bull, Paris, 14th January, 1897) publishes full notes of a bad case of placenta prævia. The patient in the eighth month of pregnancy was brought into the hospital already exhausted by profuse hæmorrhage. A dead child was extracted by version. The detachment of the placenta offered extraordinary difficulties. Maygrier was fairly puzzled by a soft mass, which he detected on introducing his hand into the uterine cavity. It was very resistant notwithstanding its softness, and the process of separation of the intimately adherent border of the placenta fatigued him so that the midwife had to conclude the process as far as possible. In spite of subcutaneous injection of ether and intravenous injections of serum the woman died an hour and a half after the delivery. The uterus was removed after death. A tumor was found occupyiug the posterior and left aspect of the lower segment of the uterus nearly reaching the os. It measured six inches in the longest diameter and was a pure fibroma, very soft, yet being made up of very resistant white fibres. The placenta, altered by disease, was closely incorporated with its lower surface. Thus was explained the fatal complication in a condition always perilous during parturition.—*Univ. Med. Mag.*

IODIDE OF POTASSIUM AND LACTATION.

G. Fieux (*Rev. Obstet. Internat.*) has tested the effect of iodide of potassium on nursing women. He finds from six observations that the coming of the milk after labour is not delayed, that the course of the lactation is not interfered with, and that the infant does not suffer, as is shown by the increase in weight during the administration of the iodide. There is no reason, therefore, to fear that the administration of iodide of potassium to a syphilitic mother will interfere in any way with her functions as the nurse of her own child. The fears that it will do so are imaginary.

ABORTION.

For the treatment of abortion, H. J. Garrigues advises instrumental dilatation of the cervix and removal of the fetus by blunt forceps with heart-shaped or oval rings, and of the placenta by the finger and dull wire curette. Before and after curettage the uterus is flushed with one per cent. creolin. If pregnancy has passed three months he then packs the uterus with iodoform gauze before tamponing the vagina, otherwise the latter is sufficient. The tampons are removed

on the second day, and a vaginal douche of one per cent. carbolic acid is given twice daily. The patient remains in bed at least for a week.—*Amer. Jour. Obstet.*

HEMORRHAGE DURING AND AFTER LABOR.

A source of the hæmorrhage during and after labor is illustrated by a case, D. A. Hodghead. Delivery was rapid, the head being born during the third pain after rupture of the membranes. A tear of the vestibule occurred extending to the median line from just below the clitoris nearly to the meatus.—*Amer. Jour. Obstet.*

PUERPERAL INFECTION.

Of the treatment of puerperal infection, E. E. Montgomery says that when examination determines the absence of anything within the uterus which should afford a cause of high temperature associated with profuse discharge, or possibly in the beginning an arrest of lochia, and particularly where there is redness or swelling of the vagina, exfoliation of the mucous membranes, presence of diphtheritic exudation upon or ulcerations of its surface, the condition should be recognized as sepsis and treated with antistreptococcic serum, local cleanliness and constitutionally supporting measures. He reports several cases successfully treated in this manner. R. R. Kline strongly condemns the use of the curette and tampon and of opium and coal tar derivatives except as temporary measures in cases of extreme pain and very high temperature. He advises drainage with the softest, most pliable and largest sized tubing the cervix will admit, with plenty of openings in the uterine portion and three openings in the vaginal portion below a cross-bar by which it is retained. This should be removed and disinfected once or twice daily, and the uterus freely irrigated with boiled water or weak solutions of carbolic acid, boric acid, creolin, or with the tincture of iodine if the uterus is flabby. In severe cases a strip of gauze may be used along the side of the drainage tube. The bowels should be kept open with salines. Bumm observed 750 confinement cases, in 22 per cent. of which he noticed a rise of temperature. In 15 per cent. the fever was due to causes not related to labour. In 29 per cent. no cause could be found. In the remaining 55 per cent. the fever arose from infection of the genital tract, streptococci causing 13 per cent., gonococci 7 per cent., putrid infection 35 per cent., while in one case colon bacilli were found. The latter case ended fatally. Streptococci infection was characterized by mildness of the attack. Savor administered antistreptococcic serum in 19 cases of puerperal infections, and

concludes that it is of absolutely no value in the treatment of this condition. In every one of these cases the presence of the streptococcus was conclusively demonstrated. The serum produced no bad symptoms. This serum has been employed by C. J. Stansley in two cases of puerperal infection in which the patients were delirious. In each, consciousness was regained, the temperature fell, and subsequently recovery occurred.—*Amer. Jour. Obstet.*

GONORRHŒA.

J. F. W. Ross considers that when a woman is delivered with proper aseptic and antiseptic precautions, even after she has undergone frequent vaginal examinations, there is ground for suspecting gonorrhœal infection if fever develops. Gonococci in the lochia may confirm the diagnosis. The curette should not be used in the presence of acute gonorrhœa, as it is one of the surest ways of causing extension of the disease to the tubes and ovaries.—*Amer. Jour. Obstet.*

CEREBRAL EMBOLISM DURING LABOR.

Shortly after rupture of the membranes, and while the os was not fully dilated, a II para became suddenly unconscious and fell to the floor. There was a slight hæmorrhage. She had general convulsions, especially marked in the left extremities. After the convulsions had ceased it was noticed that she had left hemiplegia and paralysis of the facial nerve. A second attack soon followed, resulting in complete aphasia. Novelli terminated labor by rapid extraction of the child. Except for a remaining weakness the woman recovered entirely. The author believes the paralysis was due to cerebral embolism caused by the premature detachment of a part of the placenta.—*Amer. Jour. Obstet.*

THE

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Editorial.

PROVINCIAL MEDICAL BOARD'S RECENT AMENDMENTS TO THE REVISED STATUTES OF THE PROVINCE OF QUEBEC.

Several important additions and amendments to the law respecting physicians and surgeons received the sanction of the Lieutenant-Governor at the last session of Parliament. They are as follows:

(ASSEMBLY BILL NO. 93.)

AN ACT TO AMEND THE LAW RESPECTING PHYSICIANS AND SURGEONS.

HER MAJESTY, by and with the advice and consent of the Legislature of Quebec, enacts as follows:

1. Article 3973 of the Revised Statutes is amended:

(*a*) By replacing the word: "forty," in the second line, by the word: "forty-two";

(*b*) By replacing the word: "nineteen," in the sixth line, by the word: "twenty-one";

(*c*) By replacing the word: "ten," in the thirteenth and sixteenth lines, by the word: "twelve."

2. Article 3987 of the Revised Statutes is amended by adding, at the end of the third clause, the following words:

"Such certificate shall be registered in the register of the registrar of the council, and the council of discipline may annul the same if well founded complaints are made against the person who had obtained it."

3. The following paragraph and articles are added after article 3997 of the Revised Statutes:

"§ 3*a*.—*Council of Discipline.*

I.—ORGANIZATION OF THE COUNCIL.

"3997*a*. The Board of Governors may form a council called: "Council of Discipline," of four governors selected by the board.

The president of the board shall in addition form *de jure* part of the council.

3997*b*. The council is entrusted with trying, hearing and deciding all accusations or complaints brought against a member of the college for any infringement of his professional duties or for acts derogatory to the honor of the profession.

"3997*c*. The quorum of the council is three.

The president of the Board of Governors is *de jure* chairman, and the secretaries of the board act as clerks *ex-officio*.

"3997*d*. The powers of the members of the council expire at the general meeting held for the election of the Board of Governors following their appointment, but the council may, notwithstanding the expiry of its powers, render judgment upon any complaint which it has heard upon the merits.

"3997*e*. The council shall sit at Quebec or Montreal whenever it is so required by the chairman or by two members.

The secretary of the place where the council meets acts as clerk.

"3997*f*. The Board of Governors is authorized to make regulations to define the manner of convening the council, and all other regulations concerned with the exercise of the powers of the council, provided such by-laws shall not in any wise restrict the right of the members of the corporation to practice their profession with a philanthropical and charitable object for the members of benevolent and mutual benefit associations and the charitable institutions of the Province; but such regulations do not come into form until after they have been approved by the Lieutenant Governor in Council.

II.—PROCEEDINGS UPON COMPLAINTS.

"3997*g*. Complaints do not require to be drawn up in any special form, and, in the exercise of the powers conferred upon it, the council may have recourse to all the means which it deems suitable to investigate the facts to be proved and to permit the accused to defend himself.

"3997*h*. The person who presides may swear the parties and their witnesses, and the Board may compel them to appear and to answer under oath, and punish them by fine in case of refusal, and, as regards such objects, it possesses genrally all powers of the Superior Court.

"3997*i*. The decision of the council is rendered by the majority of the members sitting.

"3997*j*. If the council find the accusation brought to be well founded, it may, according to the gravity of the case, condemn the accused to one of the following punishments:

1. Censure;

2. Deprivation of the right to be elected to the office of governor of the college, and even of the right of voting at elections of governor of the college, for a certain time;

3. Deprivation, for a certain limited and definite time of the right to practice his profession.

"3997 *k*. The council may condemn to such costs as it, deems expedient the unsuccessful party, or divide such costs, and, in addition, may condemn such party to pay to the successful party a sum intended to indemnify him for his personal expenses incurred respecting the complaint.

III.—APPEALS.

3997*l*. Every decision or judgment of the council of discipline which imposes one of the disciplinary punishments enumerated in article 3997*j* is subject to appeal to the board of governors.

Such appeal is made by letter containing a copy of the decision, addressed within fifteen days after the same is rendered to one of the secretaries of the board.

Upon receipt of such notice, the secretary of the Board of Governors of the place where the next meeting of the board is to be held, is bound to cause the record in the matter to be sent to him, and to keep it to lay it before the Board of Governors at its next meeting.

"3997*m*. The Board of Governors decides the appeal in summary manner at its earliest meeting after the receipt of the notice of appeal by the secretary.

No other evidence than that adduced before the council of discipline can be admitted on the appeal.

The Board of Governors may, however, hear the complainant and the accused or their counsel.

"3997*n*. The Board of Governors may confirm the decision of the council, or pronounce the judgment it should have rendered, and, in either case, decide, as it may deem equitable, as well as upon the costs of the first instance as of those in appeal.

"3997*o*. The decision of the council of discipline, if not appealed from within the required delays, and, in case of appeal, that of the Board of Governors are final.

IV.—EXECUTIONS OF JUDGMENTS.

"3997*p*. In default of any party paying the costs to which he has been condemned, and in default of payment of the fine by a witness condemned to pay such fine within fifteen days after the decision of the council of discipline, if there has been no appeal, or of the Board of Governors if an appeal has been taken, the party to whom such costs are due may obtain from the Superior Court of the district in which the complaint was made an execution against the moveables and immoveables of the person condemned to pay the same by depositing in the office of the prothonotary a detailed statement of such costs duly certified by one of the secretaries of the board, with a copy, certified in the same manner, of the judgment adjudicating upon the costs.

If the costs do not reach forty dollars no execution against immoveables can be issued."

4. Article 3998 of the Revised Statutes is amended by adding after the words: "such delays," at the end of the seventh clause, the words: "or by a prosecution before a justice of the peace, in conformity with the provision of Part LVIII of the Criminal Code, 1892."

5. This act shall come into force on the day of its sanction.

(ASSEMBLY BILL No. 188.)

An Act to amend the law respecting admission to the practice of medicine in certain cases.

Whereas there are at present in the universities of this Province nearly two hundred students who have commenced attending the medical course before having obtained a certificate of admission to the study of medicine;

Whereas the fact of their not having been regularly admitted to the study of medicine exposes them to lose the benefit of several years of medical studies;

Therefore, Her Majesty, by and with the advice and consent of the Legislature of Quebec, enacts as follows:

1. Notwithstanding article 3978 of the Revised Statutes, the College of Physicians and Surgeons of the Province of Quebec is authorized to admit to practice the medical students who, on the first of November, 1896, had commenced attending the medical course in a duly incorporated university of the Province of Quebec before having obtained a certificate of admission to the study of medicine, and to grant them the necessary license to practice medicine, surgery and obstetrics in the Province after having passed the examinations required for admission to study and those required for admission to practice.

2. This act shall come into force on the day of its sanction.

It will be noticed that Montreal is to have two additional representatives. These, it is understood, will represent the English Protestant and Irish Catholic element. Until now only four were elected in Montreal besides those who represent the three Universities, and these were all of French Canadian nationality—so that the English speaking portion of the profession in the city had not directly any representative on the Board. The rectification of this defective arrangement is a timely action on the part of the Board.

The appointment of a council of discipline is a very important addition to our means of maintaining a high standard of medical ethics in the profession, and some important reforms, it is stated, will be initiated and carried out under its protecting influence, including the abolishment of the Lodge Doctor in his present relations to lodges.

TRIENNIAL ELECTION OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

Unusual interest is being manifested in the approaching election of representatives to the Medical Board of the College, which takes place in Montreal on the 10th of July next, by members of the profession representing various interests; and it will not be amiss to draw the attention of the members to matters connected with this important body. All physicians registered in this province

are members of the College of Physicians and Surgeons of the Province of Quebec, and, if in good standing, are entitled to vote for those whom they wish appointed on the Provincial Medical Board or Board of Governors. It consists of forty-two members, who are elected to act for three years: fifteen from the district of Quebec, twenty-one from the district of Montreal, three from the district of Three Rivers and three from the district of St. Francis. The city of Quebec elects eight and Montreal twelve members. Laval University in Quebec elects two members, and Laval, McGill and Bishop's Universities each elects two members in Montreal from among members of the College residing in the city. The district of Quebec comprises the present judicial districts of Quebec, Gaspé, Saguenay, Chicoutimi, Rimouski, Montmagny, Beauce and Kamouraska; the district of Montreal includes Montreal, Terrebonne, Joliette, Richelieu, Bedford, St. Hyacinthe, Iberville, Beauharnois, Ottawa and Pontiac; Three Rivers comprises the present judicial districts of Three Rivers and Arthabaska, and, finally, St. Francis comprises the present judicial district of St. Francis. At each election, members can vote by proxy. The Board meets twice yearly, alternately in Quebec and Montreal. Members are paid ten dollars per diem and travelling and hotel expenses. A secretary at Quebec and one at Montreal are paid two hundred and fifty dollars each. The president, according to recent legislation, receives four hundred dollars per annum, and the registrar three hundred, and the treasurer two hundred and fifty dollars. All members of the College are required to pay an annual contribution of two dollars, and unless this is paid he is not entitled to vote at the triennial elections.

This Medical Board of forty-two members has power to legislate for the College, and have supervision of all professional matters in connection with the teaching and practice of Medicine in the province, subject to the assent of the Lieutenant-Governor of the Province in Council.

There are thirteen hundred and four licensed physicians in the province, about three hundred and fifty of whom reside in the city and suburbs of Montreal. In the province there are about one thousand of French nationality and some three hundred English-speaking, one hundred and fifty of whom reside in the city of Montreal.

As a result of this disparity, the Provincial Medical Board is composed almost entirely of French-speaking members, and in the elections the English element will count for little as they are so scattered, although they have a fair representation on the Board; so that in regard to election to the Board, the strife is mainly between the French factions. At the present time, the division is represented on one side largely by Laval University and its adherents and the Montreal Medico-Chirurgical Society, and on the other by Dr. Beausoleil and his supporters. The latter are now in full control of the Board, and have been so for some nine years. A strong effort is now being made by both the English and French practitioners of the Province to depose the leading members of the present *régime*. A circular has been sent out by each French section, translations of which we give in full, as they are supposed to fully represent the claims of each upon the suffrages of the general medical electorate. The Provincial Medical Election Committee of the Medico-Chirurgical Society have also issued a circular to the English speaking members of the College which we also print.

While the present Board has certainly some results to show which would indicate an effort made to improve the conditions of the profession, a history of its methods of doing things disposes one to minimize the credit which would seem to be due them and which would otherwise be accorded. For we would be more disposed to support a Board composed of the true representatives of the Profession at large and the University representatives, than one in which one University would be supreme. But the present Board is the result of the abuse of the Proxy system of voting and a determined effort on the part of the unscrupulous to gain the reins of power, and has been a regime in which persistent and systematic canvassing for proxies has enabled it to remain in control during three terms, and where an autocrat has held supreme sway. While we recognize the fact that some combination must be in power, we might overlook even this state of affairs if the results showed a true interest in the welfare of the profession.

The Board has certainly stiffened the entrance examinations to the study of Medicine, lengthened the course of

medical study, made many additions to the curriculum, supported inter-provincial reciprocity in the granting of licenses, secured the appointment of a council of discipline and a better method of disposing of irregular practitioners, and now advocates election by districts. But many of these reforms and others not yet accomplished were attempted some ten years ago by the representatives of the profession in a bill which was prepared after prolonged study and thought. This, we learn, was defeated largely by the rulers of the present Board, who favoured and were especially interested in the retention of the proxy system, and they have only recently, owing to the persistent clamor of the general profession, acceded to some of the latter's just demands. The influence of McGill was also potent at this time in defeating this bill, as some of the teachers were opposed to a central Board of examiners, which was one of its provisions, and one which was a prime requirement in order to have Ontario even consider the subject of reciprocity in licenses.

We are glad to note the wakening up of the Medico-Chirurgical Society of Montreal to questions of Provincial medical politics. No greater evidence of the existence of a need for reforms could be conceived than the unanimity which would seem to prevail among those signers of the circular of the Laval professors and that bearing the signatures of representatives from members of the Medico-Chirurgical Society, most of whom are members of the Faculties of McGill and Bishop's. It is a synthetical compound apparently from the same laboratory. We notice the names of members of the present Board on both these circulars, while that purporting to be the Board's issue has no signatures. Whether that of the Board and the twin productions are largely the emanations of a pair of individuals especially interested and in opposition, we will not attempt now to conjecture. In any case there is a prospect of a lively contest, and the consentaneous demand for reforms by all, bids fair to result to the benefit of the profession at large, and gives promise of terminating at least in a more desirable method of electing the Board.

Members of the College should remember that in order to vote, all dues should be paid to the Registrar, and as the

coming election of the Board will be on the old lines, those wishing to vote by proxy may receive forms from the Registrar or from the Montreal Medico-Chirurgical Society's District Electoral Committee, and to be valid they "must be in the hands of the Registrar on or before the first day of July preceding the triennial meeting, and the Registrar shall return it certified within five days from the date of its reception." The latter committee is sending proxy forms to all the English-speaking members in the province, and if they are returned to its secretary by those who cannot be present, they will be used for the purpose of electing men who will have clean records, and who can be depended upon to carry out their behests for reform in the methods for the election of governors, and who will have the true interests of the profession as their motive, and will be free to act in accordance with their own judgment on all matters pertaining to the welfare of the College. Active committees among the French speaking members in Montreal and Quebec have been formed, and are working along similar lines.

It has been attempted, on several occasions, to change the present method of voting by proxy, and the practice of the whole body of the profession voting for governors without respect to representation by districts, as it was very generally known that the present Board had abused the privileges of voting by proxy. But on each occasion the motion received only a few votes. It is quite apparent that, unless members can vote by proxy or ballot, only a few can cast their votes, as it is not always convenient, nor would many be sufficiently interested to leave their practice and come many miles simply to cast a vote. This, undoubtedly, could be done more readily if the election was confined to districts, a change which the present Board promises, and which is the leading plank in the platform of the opposition. If the leaders of present Board are in earnest in regard to election by district, this may be regarded as already an accomplished fact, but there will be the possibility of manipulating the electorate even as it is now done if the proxy system is still retained. The present Board does not pronounce itself on this subject, but generously trusts to the opinion of the next general meeting. As the proxy can only be used for the election of governors,

a full representation at the meeting of those opposed to the proxy system should be present.

We think that a system of voting by ballot paper would be less subject to abuse than any other. Each district might have an electoral committee which would prepare a list of the members in good standing, and it or the Registrar would furnish each with a ballot paper which could be forwarded by post or deposited personally.

ELECTORAL COMMITTEE OF THE PROVINCE OF QUEBEC.

Circular.

DEAR DOCTOR,

A large number of physicians have for some time been desirous of having the elections to the Medical Board made by districts, so that each portion of the Province should choose for themselves their own representatives. The present Medical Board, or rather those who act in their name, have been constantly opposed to this legitimate demand. They have rejected every motion presented to the Board with this object in view. They were not willing to allow the Quebec Legislature to amend the law upon this subject. It would be rash then to give credence to the promises which they make to accord us election by districts . . later . . after the elections! ! If such had been their desire, they should not have omitted to insert in the laws which they have just had passed at Quebec an article to this effect, and they should not have opposed so strongly the amendment which asked for election by districts, and which one of us had brought before the Legislative Council. The financial administration of this Medical Board is not satisfactory, and permits abuses to occur which it is easy to prove from reading the official reports. It is necessary to regulate the financial administration and the keeping of the books of the Board, and rectify the positions respectively of treasurer, registrar and secretaries. If the receipts and expenditures were properly controlled; if the salaries of officers had not been increased, or uselessly created; if the treasurer would see that all physicians in the Province paid their subscriptions regularly each year, the an-

nual contribution could easily be reduced, the running expenses be met and the accumulation of arrearages be prevented. This constitutes a real injustice to those who pay, and causes so much trouble to those who from forgetfulness and from not receiving their account do not pay their annual contributions, placing them in a position in which it is impossible to obtain their rights before the tribunals, or to take part in the triennial elections. It is to obtain these ends that the signers of the present circular, at the request of a large number of physicians, formed themselves into an Electoral Committee, and ask you to give them your support in order to elect a Board of Governors composed of physicians who will formally engage themselves to have the law amended, so that we shall have elections by districts and to get rid of the existing abuses.

The interests of the profession will thus be confided not to governors elected for the most part by some holder of proxies, but by governors which the profession will choose themselves in each district and for each district of the Province of Quebec.

J. L. LEPROHON, Montreal.
SIR WM. HINGSTON, Montreal.
J. P. ROTTOT, Montreal.
R. CRAIK, Montreal.
E. P. LACHAPELLE, Montreal.
F. W. CAMPBELL, Montreal.
J. J. GUERIN, Montreal.
T. G. RODDICK, Montreal.
P. PELLETIER, Sherbrooke,
L. J. A. SIROIS, St. Ferdinand.
L. S. BOULET, Joliette.
L. A. DEMERS, Montreal.
A. A. FAUCHER, Montreal.
L. J. V. CLEROUX, Montreal.
L. N. DELORME, Montreal.
J. A. LALONDE, Montreal.
A. N. RIVARD, Joliette.
J. A. S. BRUNELLE, Montreal.
J. B. A. LAMARCHE, Montreal.
J. I. DESROCHE, Montreal.
L. E. FORTIER, Montreal.
M. T. BRENNAN, Montreal.
G. T. MOREAU, Montreal.
E. P. BENOIT, *Secretary*.

P. O. Box 2189,
Montreal.

February 1st, 1891.

MONTREAL, March 1st, 1898.

SIR AND MUCH HONORED *Confrère*:—

In 1985 the members of the present Medical Board were elected on the following programme :

1. To amend the law concerning the illegal practice of medicine.

2. To obtain the necessary powers for creating a Council of Discipline to regulate the differences which might spring up between physicians.

3. To found a provincial medical library.

4. To establish a free laboratory for clinical researches.

The present Board can flatter themselves in having honored these engagements.

I.

The medical law has been amended, giving power to arrest charlatans or unlicensed practitioners and bring them before either a Justice of the Peace, the Police Court, or a Magistrate's Court, or the Circuit Court.

It was well known that until now the *rôle* of the Circuit Court—the only Court that the law permitted us to make a complaint to—was always so occupied that it required not less than 10 or 15 months to obtain a judgment. This delay was of a nature to delay the best intentions.

This grave obstacle does not now exist, thanks to the new legislation, which permits us to obtain justice promptly.

II.

The Medical Board since last session has been invested with the necessary powers for the formation of a Council of Discipline. This Council will be composed of five members the President of the Medical Board being a member *ex-officio ;* for the choice of other members the Province will be divided into four sections, each of which will have a representative.

This Council will have the right to annul certificates given by a physician to midwives unlicensed. Here is a great reform, calculated to render great service to the medical profession, and the sooner they are put into force the better.

III.

For over twenty years, at each meeting of the General Assembly of the College of Physicians and Surgeons, eminent voices have been raised calling for a provincial medical library similar to that of the Bar.

Thanks to the generosity and devotion of Mr. Brouardel, Dean of the Faculty of Paris, the College of Physicians has the first nucleus of a library formed of more than eighteen hundred theses from Paris. This gift will be perpetuated by the reception of six or seven hundred theses annually. These works represent the latest scientific contributions ; they are from the great masters of French medical science.

We are indebted to the members of the Medical Board for authorizing the Library Committee to procure copies of the best treatises on modern medicine, in surgery, medicine and obstetrics, and in the specialties.

The number of volumes will soon be sufficient to permit of free circulation throughout the province.

IV.

As to the Laboratory, a French scientist, M. Minier, who has resided in Canada, will be here shortly from Paris, with complete apparatus for a laboratory for physics, chemistry and clinical research. This commencement, which the Minister of Instruction of France, the Dean of the Faculty of Medicine and the Dean of the Faculty of Science, of Paris, have encouraged by rich presentations, will be at the disposal of the licensed practitioners of this Province.

It is then with sentiments of obligations accomplished that the present members of the Board come again before their peers, and ask from them in all confidence a continuation of the mandate which they entrusted to them in 1895.

From a purely administrative point of view the Board has performed its duties better than the preceding term.

1. It has published and distributed the proceedings of the meetings.

2. It has sent to each physician a copy of the Medical Register.

3. It has collected arrearages of the annual contribution.

4. It has had the books audited each year.

5. It has had given by the Treasurer, the Secretaries and the Registrar, as a guarantee, a policy of two thousand dollars each.

6. It has established scientific relations with the University of Paris, which honors our matriculation examination by an equivalent certificate.

7. It has put into practice a better system concerning assessors.

8. In order to give to our young graduates a wider field for professional work, the Medical Board has approved of inter-provincial registration of licenses between six of the provinces of Confederation.

This regulation establishes uniformity in the examinations for admission to study, in the curriculum of studies, in the control of the examinations for Bachelor and Doctor, so that in the future students who conform to these rules have only to present their license in order to be able to practice in the following Provinces: Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Manitoba and British Columbia. To crown this work of Canadian professional unity, the Board has appointed two of its members to confer with the Ontario Board with a view of its entering the league of inter-provincial registration. Negotiations are proceeding, and they justify us in hoping that in a few months from now this anomaly will disappear—that a Canadian physician can practice his profession only in a corner of his country.

Before soliciting your suffrage, it will be well to submit for your appreciation the programme proposed for the three coming years.

I.

When the Medical Board were before Parliament to secure the approval of the amendments concerning the illegal practice of medicine and the formation of a Council of Discipline, some physicians must needs ask for the abrogation of the clause permitting members of the College to vote by proxy at the election for governors.

As the applicants did not propose any remedy for the very grave abuses which they failed to disclose, their aim was simply to disenfranchise seventy-five per cent. of the physicians of the Province. Audacious *coup de main* work of a *master-schemer*.

We were then before the Legislative Council. The Hons. J. J. Ross and Dr. Marcil declared from their seats, in the name of the Medical Board, "that this body had not the authority to change the method of election without having previously consulted the electorate. That it would be the duty of the coming Board to change the method of voting in a manner to meet the wish which would be expressed by the general meeting of physicians of the Province in July, 1898.

Observe then our programme:

1. *To change the method of electing governors in conformity with what may be decided upon by the majority of the next general meeting on July 10th, 1898.*

2. *To give to each district the right to elect its own representatives without the participation of members in the other districts of the Province.*

II.

Now that the Medical Act concerning the illegal practice of Medicine is amended so that we can have recourse before several tribunals in the country as well as in the city, we believe that the best means of protecting the profession and the public against charlatans is to institute in each district, represented by a governor, a special agent. In this manner each section will protect itself in matters requiring prompt justice.

3. *Decentralization of the agency for preventing the illegal practice of Medicine, by giving to each district a special agent.*

Until now the assessors were chosen largely from among the physicians of the large cities. We believe that, in distributing this charge among the different districts, the profession will take a more lively interest in the questions of the progress of medical education. The responsibility will also be divided among the different sections of the Province.

4. *To perfect the system of assessors in giving to each district a representative named for three years, charged to assist at the examinations made at the different faculties.*

These are the *planks* in *the platform* of our programme, but we shall be happy, if we are elected, to put into study and practice all the reforms which the General Assembly may adopt.

A GRAVE PERIL.

Until the last few years, harmony reigned among the different sections of the Medical Board, composed of thirty-two elected governors and eight delegates from the Faculties of Medicine. The delegates from the Faculties have contented themselves with representing the interests of the body which nominated them, leaving to the elected members the care of questions which concerns the profession generally.

The majority of the Board were always happy to recognize the eminent qualities of the University delegates. They have taken their turn on the list of the honours as presidents, vice-presidents, secretaries, etc.; they never had any regrets in regard to this arrangement; on the contrary, it was quite satisfactory. But this happy state of things threatens to be overthrown by those who are attempting to disfranchise the medical electorate of this province.

Examine with us the list of subscribers to a certain circular, issued by a certain *electoral committee*, and you will find the following names, a consideration of which would indicate that there is peril threatened.

J. P. Rottot, President and Dean of the School of Medicine of Laval of Montreal.
E. P. Lachapelle, Prof. of Hygiene, " " "
L. A. Demers, Prof. of Medicine " " "
J. A. S. Brunelle, Prof. of Surgery " " "
J. B. A. Lamarche, Prof. of Obstetrics " " "
A. A. Foucher, Prof. of Clinical Ophthalmology " "
M. T. Brennan, Assistant in Histology and Gynæcology " "
L. N. Delorme, Demonstrator of Anatomy " "
G. T. Moreau, Adjunct Professor " "
Sir Wm. H. Hingston, Prof. of Clinical Surgery " "
J. J. Guerin, " " Medicine " "

Is it not to be feared that there is here a well concerted attempt to take possession of the control of professional interests?

Of the four Faculties of Medicine of this Province, the School of Medicine of Laval of Montreal, at least the greater part of its members, are desirous of supplanting the present Board, and for what? Is it because the examination for admission to study is too severe, and from that the crushing fact leaks out that about fifty per cent. of the students of this school are without matriculation certificates?

Is it because the present Board has suppressed the 'six months' annual vacation?

Is it because the present Board exacts more than an eight months' course ?

Is it because the present Board has placed the medical curriculum as high as the most advanced colleges ? Is it because the present system of assessors inconveniences these gentlemen ?

These are some of the questions which we leave with you for reflection and answer.

As a matter of fact, these are the only points of contact of the Board with the students. We still refuse to believe that these gentlemen have reduced their onslaught to a question of personality. In any case, the conduct of the majority of the Professors of this school is an intrusion upon the ground of the general profession, and we register our most energetic protest against this invasion, which nothing justifies unless it is the ambition, *ôte-toi de là que je m'y mette ! caveant consules.*

Sir, and most honored *Confrere*,—You ask, why do the present governors look for re-election ? Indeed, we are among the first to recognize that there are any number of physicians capable of serving with dignity the general interests of the profession, and, therefore, the great public ; but we ask you, is it not prudent to confide to those who have modified so advantageously our medical law, the care of putting these reforms into full exercise ? Have they not the special quality to accomplish this task ?

Have they not for this, study, observation, and experience, and the unity of action which guarantees success ?

Do you prefer by chance to have the medical body towed by an insignificant portion, irresponsible to electorate ?

Factious opposition turns always against those who encourage it.

Be advised by us ; if, owing to false representations, your good faith has been shaken, regain your liberty of action whilst there is still time. If there are any possibilities which you foresee that would prevent you from coming to Montreal on the 10th of July next for the General Meeting, give your proxy to a governor of your district, or to a regular physician in whom you have confidence, in order that he may accomplish for you the supreme duty of an elector.

You have the right to indicate for whom you wish to vote, but do not loose sight of the fact that a proved and faithful servant is worth more than all the lobbyists that ambition will throw in your path.

We have the honour to be, Sir and honored *Confrère*, with consideration, yours very devotedly.

DISTRICT ELECTORAL COMMITTEE OF THE MEMBERS OF THE MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Circular to the Profession.

SIR:—

For some time past many members of our profession have urged that the elections to the Board of Governors of the College of Physicians and Surgeons of this Province should be made by districts, so that each part of the Province might choose its own representatives on the Board. In that case each representative would be responsible to his constituents in his own district for his acts and votes, and such an arrangement would make it practically impossible for any one or two men to control the election for the whole Province, as is now practically done.

The present governing body, or more correctly speaking those who presume to act for it, have persistently opposed this reasonable demand, and have managed to defeat every motion having that end in view which has been brought forward at the meetings.

They have also used every effort to defeat any Legislative amendments to the Medical Act which would render territorial representation possible. It would be vain, therefore, to hope that they will ever spontaneously accord to the profession this right; for, during the passage of the recent Medical Legislation at Quebec, they actively opposed and managed to defeat an amendment, having this end in view, which had been brought before the Legislative Council of the Province.

The Board has not resisted, as it should have done, the numerous applications made by different individuals at every session of the Legislature to obtain an irregular entrance into the profession; and it is hard to believe that all the reports

which are current of licenses obtained by these undesirable methods are purely mythical.

The financial administration of the Council is not satisfactory, and lends itself to abuses which are so noticeable in the official reports. Reforms in the manner of keeping and collecting the accounts are urgently needed, and the duties of the Treasurer, Registrar and Secretaries should be clearly defined and enforced. If the salaries of the officials were not augmented, and new ones needlessly created; and if the Treasurer collected yearly the dues of all the medical men in the Province, it would be easy to lessen the amount of the annual assessment.

The present system of allowing arrears of dues to accumulate is not only a serious injustice to those who pay, but it is also a source of annoyance to those who desire to pay, but to whom no notice of the amount due has been sent; as the latter are thereby debarred from voting at the triennial election of governors, and their legal rights before the courts are endangered.

To remedy these, and other abuses in the present state of things, the undersigned, at the request of a large number of the profession, have been chosen as an Electoral Committee. This Committee begs you, at the coming election, to aid it in electing as governors only men who can be depended upon to work for the reforms indicated in this circular, so that the affairs of the College may be managed in a straightforward, business-like way; and that a sincere effort may be made to give to the profession proper representation and protection from illegal competition; in short, to make to the Members of the College of Physicians and Surgeons of this Province adequate return for the dues collected from them.

D. C. MacCallum, M.D.
R. Craik, M.D.
Wm. H. Hingston, M.D.
F. W. Campbell, M.D.
G. P. Girdwood, M.D.
T. G. Roddick, M.D.
James Perrigo, M.D.
James Stewart, M.D.
F. J. Shepherd, M.D.
A. C. MacDonnell, M.D.
Wm. Gardner, M.D.
D. F. Gurd, M.D.
J. A. MacDonald, M.D.
A. D. Blackader, M.D.
F. Buller, M.D.
Geo. Wilkins, M.D.
H. A. Lafleur, M.D.
A. A. Browne, M.D.
F. R. England, M.D.
James Bell, M.D.
A. Proudfoot, M.D.
Geo. Armstrong, M.D.
Lapthorn Smith, M.D.
J. J. Gardner, M.D.
Wyatt Johnston, M.D.

J. M. ELDER, M.D.,
Secretary.

Book Reviews.

Orthopedic Surgery.—By James E. Moore, M.D., Prof. of Orthopedic and Clinical Surgery, College of Medicine, University of Minnesota, etc. Philadelphia, W. B. Saunders, 1898. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

This is a work of 354 pages, containing 177 illustrations, all well selected, and many of them excellent photographs. The type and binding are of the best, and the paper is above the average.

The author has wisely chosen descriptions of what is most modern and useful, and has eliminated tedious details of what "has been." It is eminently the work of a close observer and not of a theorist, and as such commends itself to the student and busy practitioner alike. While this branch of surgery, in which actual operation is so often replaced by mechanical apparatus, demands such careful adjustment and prolonged attention that the patience and resources of the surgeon are taxed to the utmost, it is indeed convenient to have at hand so practical a work for ready reference.

The ready ingenuity of the Americans have brought them well to the front in this branch of surgery, and to those of a mechanical turn of mind it is a pleasure to observe the way in which diseased bodies are strengthened by cleverly arranged supports.

A Clinical Text-Book of Surgical Diagnosis and Treatment. By J. D. Macdonald, M.D., Professor Surgery and Clinical Surgery, Hamline University, Minneapolis, etc. Cloth $5.00 ; ½ mor. $6.00 net. W. B. Saunders, Philadelphia, 1898. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

What a good work on physical diagnosis is to Medicine, this work is to Surgery, plus a most concise description of modern surgical treatment. It is well illustrated, containing 328 illustrations, many of them original photographs. The treatment of the various headings is especially adapted for students and busy practitioners, who have not the time to wade through a long history of the gradual development of each succeeding theory with its accompanying statistics and criticisms, but who desire the most recent knowledge in a compact form.

The various points concerning similar affections arranged under the heading "diagnosis" are of great value, and give light to many a confused observer. Although the articles are terse, yet the exhaustive range of the work produces a volume of 781 pages.

As an up-to-date work it touches on that fourth state of matter, *i.e.*, radiant matter as utilized in the form of X-rays for surgical diagnosis.

Students and practitioners will find in this a volume of real practical value, and should not fail to secure it.

The Care and Feeding of Children.—A Catechism for the use of mothers and children's nurses. By L. Emmett Holt, M.D., Professor of Diseases of Children in the New York Polyclinic; Attending Physician to the Babies' Hospital and the Nursery and Child's Hospital, New York. Second Edition, revised and enlarged. D. Appleton & Co., New York.

A lot of new matter has been added to this edition, which contains over a hundred pages. The information is invaluable for mothers and those in charge of children. It is arranged in the form of questions and answers, and covers numerous points in regard to the care and feeding of children. On such subjects as bathing, clothing, weight, growth and development, dentition, nursing, weaning, mother's milk, preparation of cow's milk, how to feed, various food formulas, bowels, sleep, exercise, lifting babies and children, various minor accidents, colic, earache, croup and contagious diseases, bad habits, etc. These and other subjects are discussed and clear explanations and advice given, which, coming from so eminent an author, conveys information from the best authority on many points which are of paramount importance in regard to the welfare of the little ones. Physicians would promote their comfort by recommending this little work freely.

Saunders' American Year-Book of Medicine and Surgery.—A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monograms and text-books, of the leading American and foreign authors and investigators. Collected and arranged by eminent American specialists and teachers, under the editorial charge of George M. Gould, M.D. In one imperial octavo volume of about 1200 pages, uniform in size with the "American Text-Book" series. Profusely illustrated. Prices: cloth, $7.50 net; half morocco, $8.50 net. W. B. Saunders, publisher, 925 Walnut St., Philadelphia. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

"The design of this work is to give in a compact form an epitome of the new and progressive medical truths or suggestions published during the preceding year. A work that places before the physician in convenient form an epitomization of this literature by persons competent to pronounce upon the value of a discovery or of a method of treatment cannot but command his highest appreciation. It is this critical and judicial function that will be assumed by the Editorial staff of "Saunders' American Year-Book of Medicine and Surgery," in reviewing not only recent monograms and the contributions to American journals, but also the methods and discoveries reported in the leading medical journals of Europe."

The publishers thus announce the third issue of the Year-Book.

The matter has been collected and arranged with critical editorial comments by the following:

S. M. Abbott, M.D.; J. J. Abel, M.D.; J. M. Baldy, M.D.; Chas. H. Burnett, M.D.; Archibald Church, M.D.; J. Chalmers DaCosta, M.D.; W. A. Newman Dorland, M.D.; Louis A. Duhring, M.D.; Virgil P. Gibney, M.D.; Homer W. Gibney, M.D.;

Henry A. Griffin, M.D.; John Guitéras, M.D.; C. A. Hamann, M.D.; Howard F. Hansell, M.D.; Barfon Cook Hirst, M.D.; E. Fletcher Ingalls, M.D.; Wm. W. Keen, M.D.; Henry G. Ohls, M.D.; Hugh T. Patrick, M.D.; Wyatt Johnston, M.D.; William Pepper, M.D.; Wendell Reber, M.D.; David Riesman, M.D.; Ls. Starr, M.D.; Alfred Stengel, M.D.; G. N. Stewart, M.D.; J. R. Tallinghast, jr., M.D.; Thompson S. Westcott, M.D.

We understand that the success of Saunders' Year-Book has been beyond expectation, and that there is this year an unprecedented demand for it. The size of the volume remains the same, and it is intended not to enlarge it, as in its present condition it is sufficiently elaborate for the needs of the profession. Works of this kind, which are more comprehensive, are undoubtedly popular with teachers and specialists, and useful to those engaged in medical literary work.

The bulk of the profession do not desire any but a concise epitome of the progress made in the different departments of Medicine and Surgery, and this want is admirably met by the present work.

Each department opens with a general summary of the year's work, indicating the various lines in which progress has been made. Throughout the department critical notes are made by the compiler which are of the greatest value, and one recognizes the work of an authoritative leader throughout the section, choosing that which is of value and eschewing the doubtful, or referring to similar work in the previous year. One can then in a short time become informed in regard to the progress made throughout the world, and receive information culled from scores of writers and hundreds of journals.

A work of this kind is indispensable to the busy physician, who can, by looking it through, keep fully abreast in all the departments of Medicine. This Year-Book gives evidence of careful and thorough work on the part of Dr. Gould and his staff of collaborators. It is well illustrated throughout with cuts, photographs and colored plates, and contains an immense amount of useful information.

Outlines of Rural Hygiene. For Physicians, Students and Sanitarians. By Harvey B. Bashore, M.D., Inspector for the State Board of Health of Pennsylvania. With an Appendix on The Normal Distribution of Chlorine by Prof. Herbert E. Smith of Yale University. Illustrated with twenty (20) engravings. 5½ x 8 inches. Pages vi-84. Extra Cloth, 75 cents net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia; 117 W. Forty-Second St., New York City; 9 Lakeside Building, 218-220 S. Clark St., Chicago, Ill.

Much of the benefit to be obtained from residence in the country may be neutralized by unsanitary conditions in and about the dwelling houses.

This little volume of 78 pages contains much that is useful in the way of advice as to how to prevent the spread of illness through the contamination of drinking water, and how to secure a pure water supply from wells, rivers, lakes and springs.

The disposal of waste is fully considered, such as excreta,

slop waters and garbage. There is a chapter also on the soil, referring to surface soil, ground moisture, ground water and ground air.

In regard to dwellings, advice is given as to the site, drainage, ventilating, heating, etc. Other points considered are the disposal of the dead and the normal distributions of chlorine. The free circulation of the little work throughout the country would prevent much suffering and illness.

Diseases of the Eye. New (5th) and Revised Edition. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon at St. Thomas' Hospital, London; Surgeon to the Royal London (Moorfields) Ophthalmic Hospital. Revised and Edited by W. T. Holmes Spicer, M.A., M.B., F.R.C.S., Ophthalmic Surgeon to the Metropolitan Hospital and to the Victoria Hospital for Children. Fifth American from the sixth English edition. With a supplement on Color Blindness by William Thomson, M.D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. Handsome 12mo. of 521 pages, with 2 colored plates and 161 engravings. Cloth, $2.25. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

There is hardly any necessity to express an opinion about this so widely known and thoroughly good work on the eye of Mr. Nettleship's.

The American edition is in some ways an improvement on the English, especially worthy of notice being the additional chapter on Colour Vision written by Dr. Thompson.

As a text-book for both the busy practitioner and the medical student, this work cannot be too strongly recommended.

The contents are the result of the long experience and sound judgment of the author, who is "facile principe" among the Ophthalmic Surgeons of the day.

Messrs. Lea Bros. & Co. have brought out the book in the usual good style which characterizes their house.

King's Manual of Obstetrics—New (7th) Edition. By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of the Columbian University, Washington, D.C., and in the University of Vermont, etc. In one 12mo. volume of 573 pages, with 223 illustrations. Cloth, $2.50. Lea Brothers & Co., Publishers, Philadelphia and New York.

That a new edition of this work has been called for is a proof, if any were needed, that it is a work that is appreciated by the medical profession, and particularly by students. Its most marked characteristic is that it gives full details of all that is needful without being verbose. The advances all along the line of the obstetrical art are noted, and much new matter is added. Some of it, especially the chapter on septicæmia, is entirely new. We can heartily recommend this work as being both thoroughly practical and up to date.

The Treatment of Disease by Electric Currents.—A Handbook of plain instructions for the general practitioner. By S. H. Monell, M.D., founder and chief instructor of the Brooklyn Post Graduate School of Clinical Electro-therapeutics and Roentgen Photography; Fellow of the New York Academy of Medicine; Member of the New York County Medical Society, and New York Electrical Society; Editor of the Electro-therapeutic Department of the *Medical Times and Register*, author of Manual of Static Electricity in X Ray and therapeutic uses.

Dr. Monell, the author of this work, is, it is very evident, an inveterate worker and prolific writer. It is only a few months ago that it was our privilege to receive his large work on Static Electricity in X ray and therapeutic uses. The volume before us contains eleven hundred pages, printed in open large type. There are seventy chapters, including all that one needs to know in regard to Electro-therapeutics. In the preface the author states that his aim has been to make the treatise a plain handbook of instruction in the medical uses of electricity, avoiding electrotechnics, and adopts a simplified nosology. He states:

"I have attempted to clear away many of the perplexities of the subject. The central facts of electro-physics and physiology are condensed into a few chapters, while the major portion of this treatise deals with therapeutics alone. I have aimed to make every chapter as instructive as a clinic. As the name of a disease does not always signify the pathological state or stage of a progressive lesion, I have described the electrical treatment for a variety of different clinical conditions in important diseases, so that the physician can turn to these pages for practical help in the treatment of his own cases. The reader will find explicit indications for the selection of current, choice of poles, application of electrodes, regulation of dose, and duration and frequency of treatment, throughout the therapeutic range of galvanic, faradic and static currents."

One cannot in a brief review more than hint at the scope of the work, so numerous are the points discussed. The author attempts to separate from the vast amount that is written on the subject, much of which only tends to discourage and confuse the student, that which is essential and which his experience and that of other capable observers has shown to be of practical importance. Few practitioners have had the advantage of a proper training in the use of electricity at College, and have to gain this information in Post Graduate Courses, but this work enters into the elementary points necessary to success in such a manner that one can instruct himself fully from its directions.

Chapter third is interesting from this point of view. There will be found a definition of all the important technical terms used, and the discussion of such subjects as tolerance, electrodes, how to test the polarity of each current, therapeutic polarity, practical operative methods. The essentials of galvanic electrophysics includes reference to cells, elements and switchboards, exciting fluids, milliameters, rheostate, etc.

The physiological and therapeutic action of galvanic currents upon and within living tissues is then described, followed by a description of cautery apparatus. The essentials of Faradic electro-

therapeutics is similarly treated, as is also static electro-physics. The description of the special effects that can be produced by static methods is very interesting, and evidences the powerful and varied effects that may be derived from this subtile force. Interesting chapters follow on indications and contra-indications and electro diagnosis for the general practitioner.

Over three-fourths of the book is taken up with electro-therapeutics. First, some three hundred pages are devoted to gynæcological and pelvic therapeutics. This is the department in which the most progress has been made and the best results obtained. The indications for the use of the various currents of electricity and the results that can be obtained have now reached such a condition of exactness that we must now regard this means of treatment as having wider application than any other.

These pages suggest a brief work on gynæcology, so general does this remedy seem applicable. The treatment of genito-urinary and rectal disease is fully considered, and the good results which may be secured in many of the morbid conditions scientifically demonstrated.

Chapter 37 describes the therapeutic results to be obtained from the electric light, the X rays, sinusoidal current, cataphoresis, metallic electrolysis, thermo-electric currents, electric water bath and douche, etc.

The remainder of the book takes up the details of treatment of gastric disorders, pain, headaches, neurasthenia, insomnia, neuralgia, rheumatism, paralysis and various nervous affections, pulmonary, cardiac and renal disorders and diseases of the eye, ear, nose, and throat, skin diseases and various miscellaneous affections. When one sees how much can be written on a single therapeutic agent like electricity, it excites wonder to know why it is not more generally used hy practitioners generally. But reading a work of this kind forces the conclusion that a perfect knowledge of the subject and experience in the administration of electricity, as well as suitable apparatus, are required in order to obtain any measure of satisfactory results. But this does not generally exist, hence the general skepticism in regard to its utility. A feature of this book we do not like is the constant repetition of the same diagrams, sometimes occurring on the two pages of a sheet. These add unnecessarily to the volume of its already formidable dimensions, and would be much better left out or replaced by others that would aid in making clear points in the application of this remedy. Readers of this work, however, may become versed in all the technical uses of this potent remedy, and cannot fail to catch the enthusiasm which characterises this author's work.

A System of Practical Medicine by American Authors. Edited by Alfred Lee Loomis, M.D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1000 pages each, fully illustrated in colors and in black. Volume III.—Diseases of the Alimentary Canal, Peritoneum, Liver and Gall Bladder, Spleen, Pancreas and Thyroid Gland, Chronic

Metal Poisoning, Alcoholism, Morphinism, Infectious Diseases Common to Man and Animals, Miscellaneous Subjects. For sale by subscription. Per volume, Cloth, $5.00; Leather, $6.00; Half Morocco, $7.00. Lea Brothers & Co., publishers, Philadelphia and New York, 1898.

In this volume the following subjects are considered: Diseases of the Mouth and Throat by Dr. Richard C. Cabot; of the Œesophagus, by Alma Jones, M.D.; Stomach, by C. G. Stockton, M. D., and Allen A. Jones, M.D.; Intestines, by Wm. Johnston, M.D. and H. M. Lyman, M.D.; Appendicitis, by M. F. McNutt, M.D.; Parasites, by Dr. Geo. Dock; Food Poisoning, by Dr. Victor C. Vaughan; Peritoneum, by H. A. Hare, M.D.; Liver, by Dr. J. E. Graham; Spleen and Purpura, by Geo. Roe Lockwood, M.D.; Pancreas, by Charles J. Stockton, M.D.; Thyroid Gland, by Frank P. Kinnicutt, M.D.; Cretinism and Myxœdema, by M. Allan Starr, M.D.; Chronic Metal Poisoning, by F. J. Findley, M. D.; Alcoholism and Morphinism and Beri Beri, by Dr. James Stewart; Infectious diseases Common to Man and Animals, by James Law, F.R.C.V.S.; Hæmophilia Felaria Sanguinis Homnis, by Walter B. James, M.D.; Diabetes Glycosuria, by Warren Coleman, M.D.; Insolation, by Alex. Lambert, M.D. From this list, one ascertains that in every instance thoroughly qualified men have had the preparation of the articles. One is struck with the practical style of writing which characterizes most of the articles. From the vast amount of literature to be worked over, whether as books or journals, the net result is here to be found representing in articles not too extended a clear statement of our present knowledge.

This is well exemplified in the article on Appendicitis, where etiology, pathology and symptoms are given in such a manner as to make exceedingly interesting and instructive reading.

An interesting section is that on food poisoning (Bromatotoxismus), by Dr. Victor Vaughan. He discusses chiefly food infected with harmful micro-organisms, such as meat poisoning (Kreatoxismus); here the dangers of tuberculous anthrax and even ordinary bacterial affections, such as diarrhœa, in an animal at the time of slaughtering are pointed out. Sausage poisoning (Botulismus) is shown to be due to harmful saprophytic micro-rganisms. Other subjects discussed are milk poisoning (Galactotoxismus), fish poisoning (Ichthyotoxismus), cheese poisoning (Tyrotoxismus), ergotismus, lathyrismus and maidismus.

Several of the articles it will be seen are written by Canadians, That on Disease of the Liver, by Dr. Graham, gives evidence of considerable labour, and he has in the hundred pages devoted to the subject given us a comprehensive view of our present status in regard to this interesting class of affections. Dr. Starr's article on Cretinism and Myxœdema is very fully illustrated with cases showing the appearances before and after treatment with thyroid extract. The article on Insolation by Dr. Lambert is very complete; plates showing the characteristic lesions in the brain of acute parenchymatous degeneration of the ganglion cells are given from Van Gieson, who first designated them. The pathology of this affection makes interesting reading, and probably nowhere else than in this

article could the literature of the subject be found so fully represented.

This volume is quite worthy of the literary and scientific standard aimed at for this system by its promoters.

PUBLISHERS DEPARTMENT.

LITERARY NOTES.

A beautifully illustrated account of a winter trip to the Sahara Desert, by Prof. Angelo Heilprin, is announced for the March number of *Appletons' Popular Science Monthly*. Professor Heilprin's attractive style and reputation as a careful scientific observer promise an instructive and entertaining story.

Under the title An Apostate Democracy, *Appletons' Popular Science Monthly* for March will publish a sharp criticism of the degeneration in American methods of Government, by Franklin Smith, who has during the past two years achieved an enviable place among writers on modern economics by his arraignment of some of the most glaring of our political and educational abuses.

The Pioneer Scientific Society of the West, the Academy of Natural Sciences of St. Louis, is described by Prof. Frederick Starr, of the University of Chicago, in an illustrated article in *Appletons' Popular Science Monthly* for March.

G. P. Putnam's Sons announce that they expect to begin in the near future the publication of a series of volumes prepared by Moses Coit Tyler, Professor of History in Cornell University, which will be issued under the following subject title:

"A Century of American Statesmen: A Biographical Survey of American "Politics from the Inauguration of Jefferson to the Close of the Nineteenth "Century."

Volume I.—Jefferson, Hamilton, Burr, John Randolph, Josiah Quincy, Madison, Munroe, Gallatin, Marshall, John Quincy Adams.

Volume II.—Andrew Jackson, Calhoun, Webster, Clay, Van Buren, Polk, Zachary Taylor, Cass, Benton, Franklin, Pierce.

Volume III.—Giddings, Seward, Chase, Sumner, Jefferson Davis, A. H. Stevens, Douglas, Buchanan, Lincoln.

Volume IV.—Grant, Andrew Johnson, Conkling, Blain, B. F. Butler, Carl Schurz, Garfield, Sherman, Cleveland, Harrison, McKinley.

As will be inferred from the title, the work, which is to be in several volumes, is based on the idea of presenting a rapid survey of the great events of American history during the century now drawing to a close by presenting in vivid outline the lives and characteristics of the chief statesmen who, whether for good or for ill, have influenced American political life since the 4th of March, 1801. To each statesman included in the plan will be devoted a single chapter, wherein the scale and method of the portrait will be somewhat like that of the same author's work in his little book called "Three Men of Letters."

Professor Tyler has also in preparation a volume which will present the literary History of the American Republic during the first Half-Century of their Independence—1783-1833. This work will form a continuation of the volume previously published on the literature of the Colonial and the Revolutionary periods.

W. B. Saunders, publisher, 925 Walnut street, Philadelphia, sends us an advance bulletin of new books to be published early in 1898.

Mr. Saunders is pleased to announce that arrangements have been completed for the publication of an English edition of the world-famous Lehmann

medicinische Handatlanten. For scientific accuracy, pictorial beauty, compactness and cheapness these books surpass any similar volumes ever published. Each volume contains from 50 to 100 colored plates, besides numerous other illustrations in the text. These colored plates have been executed by the most skilful German lithographers, in some cases twenty or more impressions being required to obtain the desired result. There is a full and appropriate description of each plate (printed, for convenience, opposite the plate), together with a condensed outline of the subject to which the book is devoted. The same careful and competent editorial supervision will be secured in the English edition as in the originals. The translations will be directed and edited by the leading American specialists in the different subjects, and the price will be heretofore unapproached in cheapness.

The following volumes are in active preparation and will be issued at an early date :

ATLAS OF INTERNAL MEDICINE AND CLINICAL DIAGNOSIS.—By Dr. Chas. Jakob, of Erlangen. Edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic ; Attending Physician to the Philadelphia Hospital. 68 colored plates, and 64 illustrations in the text.

ATLAS OF LEGAL MEDICINE.—By Dr. E. R. von Hofmann, of Vienna. Edited by Frederick Peterson, M. D., Clinical Professor of Mental Diseases, Woman's Medical College, New York ; Chief of Clinic, Nervous Dept., College of Physicians and Surgeons, New York. With 120 colored figures on 56 plates, and 193 beautiful half-tone illustrations.

ATLAS OF OPERATIVE SURGERY.—By Dr. O. Zuckerkandl, of Vienna. Edited by J. Chalmers DaCosta, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia ; Surgeon to the Philadelphia Hospital. With 24 colored plates, and 217 illustrations in the text.

ATLAS of LARYNGOLOGY.—By Dr. L. Grunwald, of Munich. With 107 colored figures on 44 plates ; 25 black and white illustrations.

ATLAS OF EXTERNAL DISEASES OF THE EYE.—By Dr. O. Haab, of Zurich. Edited by G. E. de Schweinitz, M. D., Professor of Ophthalmology, Jefferson Medical College, Philadelphia. With 100 colored illustrations.

ATLAS OF VENEREAL DISEASES.—By Dr. Karl Kopp, of Munich. Edited by L. Bolton Bangs, M. D., late Professor of Genito-Urinary and Venereal Diseases, New York Post Graduate Medical School and Hospital. With 63 colored illustrations.

ATLAS OF SKIN DISEASES.—By Dr. Karl Kopp, of Munich. With 90 colored and 17 black and white illustrations.

THE AMERICAN TEXT BOOK OF GENITO-URINARY AND SKIN DISEASES will be placed on the market about the latter part of next month. This will be one of the best books in the American Text Book Series, as it contains a very large number of beautiful and well-executed illustrations which have been specially made for this work. Doctors Bangs and Hardaway have associated with them a large number of the most prominent men in their specialties in this country.

VAL VALZAH AND NISBET'S DISEASES OF THE STOMACH, we expect to be able to send out next month, as well as copies of KEEN'S SURGICAL COMPLICATIONS AND SEQUELS OF TYPHOID FEVER, and DR. CHAPIN'S COMPENDIUM OF INSANITY.

IN PREPARATION FOR EARLY PUBLICATION.

AN AMERICAN TEXT-BOOK OF DISEASES OF THE EYE, EAR, NOSE AND THROAT.—Edited by G. E. de Schweinitz, M.D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia ; and B. Alexander Randall, M.D., Professor of the diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

AN AMERICAN TEXT-BOOK OF PATHOLOGY.—Edited by John Guitéras, M.D., Professor of General Pathology and of Morbid Anatomy in the University of Pennsylvania ; and David Riesman, M.D., Demonstrator of Pathological Histology in the University of Pennsylvania.

AN AMERICAN TEXT-BOOK OF LEGAL MEDICINE AND TOXICOLOGY.—Edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases in The Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York; and Walter S. Haynes, M.D., Professor of Chemistry, Pharmacy and Toxicology in Rush Medical College, Chicago, Illinois.

STENGEL'S PATHOLOGY, A MANUAL OF PATHOLOGY.—By Alfred Stengel, M.D., Instructor in Clinical Medicine, University of Pennsylvania; Physician to the Philadelphia Hospital; Professor of Clinical Medicine, Woman's Medical College; Physician to the Children's Hospital; late Pathologist to the German Hospital, Philadelphia, etc.

CHURCH AND PETERSON'S NERVOUS AND MENTAL DISEASES.—Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School, Chicago; Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York.

HEISLER'S EMBRYOLOGY—A TEXT-BOOK OF EMBRYOLOGY.—By John C. Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia.

KYLE ON THE NOSE AND THROAT.—DISEASES OF THE NOSE AND THROAT.—By D. Braden Kyle, M.D., Chief Laryngologist to St. Agnes' Hospital; Bacteriologist to the Orthopedic Hospital and Infirmary for Nervous Diseases; Instructor in Clinical Microscopy and Assistant Demonstrator of Pathology, Jefferson Medical College, Philadelphia.

HIRST'S OBSTETRICS—A TEXT-BOOK OF OBSTETRICS.—By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania.

WEST'S NURSING.—AN AMERICAN TEXT-BOOK OF NURSING.—By Ameriean Teachers. Edited by Roberta M. West, late Superintendent of Nurses in the Hospital of the University of Pennsylvania.

A WINTER REMEDY.

That Codeine had an especial effect in cases of nervous coughs, and that it was capable of controlling excessive coughing in various lung and throat affections, was noted before its true physiological action was understood. Later it was clear that its power as a nervous calmative was due, as Bartholow says, to its special action on the pneumogastric nerve. Codeine stands apart from the rest of its group, in that it does not arrest secretion in the respiratory and intestinal tract.

The coal-tar products were found to have great power as analgesics and antipyretics long before experiments in the therapeutical laboratory had been conducted to show their exact action. As a result of this laboratory work we know now that some products of the coal tar series are safe, while others are very dangerous. Antikamnia has stood the test both in the laboratory and in actual practice; and is now generally accepted as the safest and surest of the coal-tar products. Five grain "Antikamnia and Codeine Tablets," each containing 4¾ grains Antikamnia, ¼ grain Sulph. Codeine, afford a very desirable mode of exhibiting these two valuable drugs. The proportions are those most frequently indicated in the various neuroses of the throat, as well as the coughs incident to lung affections.

SANMETTO IN INCONTINENCE OF URINE.

I used Sanmetto in a case of a lady forty years of age, who could not retain her urine more than one hour for years. She had been under treatment before, without any remarkable result. I put her on teaspoonful doses of Sanmetto four times daily, and her improvement was very marked, and she is now practically cured. I desire to keep Sanmetto on hand, as there is nothing better to fill its place in such cases.

Milwaukee, Wis. FRED. A. GOEDECKE, M.D.

SANMETTO A STANDARD REMEDY IN GENITO-URINARY DISEASES.

I have prescribed Sanmetto in a large number of cases of genito-urinary troubles durlng the last four years, and with uniformly good success. In prostatic troubles of old men, with difficult micturition, it acts like a charm. In cases of irritable bladder with incontinence of urine, I have never met with any remedy that acts so well. I prescribe it frequently, and shall continue to do so, as I look upon it as a standard remedy.

Alma, Mich. J. F. SUYDAM, M.D.

THE LIVING AGE.

The Living Age needs but to be read to be appreciated. Elevating, entertaining and instructive, it embraces every department of literature, including some of the best fiction of the day and poetry, and contains something for every variety of taste.

The following partial contents of its February issue is suggestive of its wide scope and great value. It is indeed invaluable to one who has neither time nor opportunity for scanning all the magazines, but who is desirous of keeping abreast of the literary current.

"The Degradation of Dreyfus," from the French of Adolph Brisson, in *Les Annales;* "A Session of The Reichstag," from the German of Richard Nordhausen, in *Ueber Land und Meer;* "The Coming of the Slav," by Geo. Washburn, D.D., in *Contemporary Review;* "Lewis Carroll" from the *Spectator;* "The Higher Education of Women in Russia," by Princess Kropotkin; "A Walk thro' Deserted London," by Sir Algernon West; "A Simple Story," from the Polish of M'me Marguerite Poradowzka; "A Lady's Life on a Ranch," by Moira O'Neill; "Pilgrims and Emigrants," from the French of Emile Bertaux; "A Woman Learned and Wise," by Alexander H. Japp; "Burns," by Charles Whibley—and many others, with fiction, including an instalment in each number of "With all Her Heart," a delightful serial, translated for *The Living Age* from the French of Rene Bazin, and several short stories, and poetry.

The Living Age is published weekly at $6.00 a year by the *The Living Age Co.*, Boston. Send 15 cents for a sample copy and special offer to new subscribers.

HERE IS SUCCESS FOR YOU.

"Inside figures" are always interesting, and the following are certainly some striking ones about *The Ladies' Home Journal.* During 1897, 8,183,113 copies of this magazine were printed and so thoroughly sold that the latter-year issues are entirely out of print. It consumes 3,434,362 pounds of paper in a year, and absorbs 30,902 pounds of ink. It runs 28 presses. The advertising columns contained $498,325 worth of advertising during the last year. The editors received 9290 manuscripts and less than one per cent. were accepted. The magazine employs 22 staff editors. 24,648 letters have been received and answered in the year by the editors of the correspondence columns. The *Journal* has over 15,000 active working agents on the road getting subscriptions. It has educated 442 girls free of charge under its free educational plan. In a single day it has received as high as 18,000 subscriptions. 300,000 copies of the *Journal* are sold each month on the news stands alone—425,000 people subscribe for it by the year.

SPEECHES AND SPEECH MAKING.

BY JUDGE J. W. DONOVAN.

This book upon its appearance obtained an immediate and wide-spread popularity. And that is natural, for it is of practical interest and value to every man who has or hopes for any prominence in his community. It contains nearly 300 pages, giving practical hints and helps both as to preparing and delivering speeches; examples of speeches for the many different occasions on which we are

all apt to be called upon for speeches, when we have not time to prepare and must depend upon the preparation of times past. This book will aid one to prepare for such occasions. The sooner a man begins to prepare the better, for he cannot become a good public speaker at a bound, but public speakers are made as well as born.—Handsomely bound in Cloth, $1.50 delivered.

MODEL BANQUET SPEECHES.

By Famous Banquet Speakers.

Here we offer you the finest collection of after-dinner speeches ever gathered together in one book, for they are not a collection of the utterances of one man, but are the best efforts of many men famous at the banquet board, such as Thomas A. Hendricks, Senator Vilas, James G. Jenkins, Geo. W. Wakefield, Thomas F. Bayard, Gen. J. C. Black, Rev. Wm. E. Park, Dr. Hirsch, John B. Green, Henry Woolman, Joseph C. Hendrix, Judge Grosscup, Senator Foraker, Chauncey M. Depew, and many others "of infinite jest, of most excellent fancy and flashes of merriment that were wont to set the tables on a roar." The speeches here given cover an infinite variety of subjects and occasions—bar banquets, business men's banquets, political banquets, occasional celebrations, and all kinds and conditions of society gatherings. The after-dinner speaker, or one who would be such, wants this book.—Handsomely bound in Cloth, $1.50 delivered.

NEURECTOMY FOR TIC DOULEUREUX.

Bernays' "Report of a Surgical Clinic," complimentary to the Members of the Mississippi Valley Medical Association, contains the following, in reference to his patient's condition and treatment before neurectomy for tic-douleureux was decided upon: –

"Case V.—The patient, aet. 50, white, female. Family history: Has one sister who suffered from emotional insanity; otherwise the family history is good. Previous health excellent. The present trouble began with a severe neuralgic toothache, localized in the right lower molars. Paroxysms of pain were of daily occurrence, and most severe in the mornings about breakfast time. The pain subsided temporarily whenever the teeth were pressed firmly together or upon any substance held between them, but only to return when the pressure was withdrawn. The presence of anything cold in the mouth immediately produced the most exquisite pain; moderate heat produced a soothing effect. After two months the pain became continuous, and four molars were extracted without in any way relieving it. On the contrary, the pain increased in severity until October when it ceased entirely for a period of two weeks, and then returned as severely as before. Another tooth was sacrificed, but without relief; the pain became continuous until last June, when it again subsided for a period of six weeks. A recurrence then took place together with an involvement of the parts supplied by the second branch of the fifth nerve. Pain has been constant until the operation. She had strenuously avoided the use of narcotics, but during the more active periods of pain antikamnia in ten grain doses was found to be an efficacious obtunder." After describing the neurectomy, Prof. Bernays says: "Eight weeks have now elapsed since the operation and no recurrence of the trouble has taken place."

CANADA
MEDICAL RECORD

MARCH, 1898.

Original Communications.

ARTIFICIAL ANUS CLOSED FIVE MONTHS AFTER COLOSTOMY — REPORT OF THE CASE.

By FRANK R. ENGLAND, M.D.,
Surgeon to the Western General Hospital.

E. I., a bright and healthy looking lad, aged fifteen years, was admitted into the Surgical Ward of the Western Hospital on February 3, 1898. He comes with an artificial anus which he wishes, if possible, to have closed, and the normal relations of the bowel restored.

Family history is negative.

Personal History.—Patient never suffered from any illness of importance until the beginning of September, 1897, when he complained of headache and feeling out of sorts. On the 22nd day of September he was seized with severe pain in the left lumbar region, radiating over the abdomen. A physician was called in, who prescribed poultices and a dose of castor oil. The same evening he was taken to one of the city hospitals, where an operation for appendicitis was performed soon after admission. The usual lateral incision was made. On opening the abdomen the cæcum and appendix vermiformis were found to be normal. The incision was closed, and on further examination a tumor of considerable size was discovered blocking the rectum, and situated about four inches from the anus. The mass was considered as probably tubercular. A left iliac colostomy was then per-

formed. The symptoms were relieved by the operation, and the patient was discharged from the hospital November 1st. Since the operation the bowels have acted two or three times a day by the artificial anus, the stools being well formed and normal in character.

February 10.—The patient was examined under an anæsthetic, no tumor could be made out, and water injected into the rectum, under a slight pressure, flowed out at the artificial opening.

February 12.—A heavy soft rubber tube, one inch in diameter and five inches in length, secured in the middle with a strong silk ligature, was introduced into the lumen of the bowel through the artificial anus, and held securely beneath the parietes by tying the tube to a pad of gauze placed over and closing the artificial anus. The patient was put to bed, and the tube allowed to remain in the bowel till the following day, with the effect that two large but rather soft evacuations were passed per rectum, showing that the lower bowel was pervious.

February 13.—Patient complained of some pain, and there was considerable swelling of the mucosa, due to the irritation of the tube. The tube was removed with but little difficulty, and the intestine irrigated with boracic acid solution.

February 19.—Having decided to close the artificial anus, the patient was anæsthetized, and Drs. Rollo Campbell and George Fisk kindly assisted me at the operation. An incision was made around the fistula at the junction of the mucous and cutaneous surfaces. The walls of the bowel having been slightly freed, and, before opening the peritoneal cavity, a continuous Glovers' suture of iron dyed silk was introduced to close the fistula and thus protect the peritoneum against contamination. The bowel was then freed from the parietes, the abdominal incision enlarged, and the peritoneal cavity opened. It was found that the omentum was adherent to the abdominal wall and to the intestines, and that the descending colon had been opened when the colostomy was performed. With the hand in the abdominal cavity no tumor or thickening could be discovered in the sigmoid or rectum, so it was decided to close the fistula.

Any lymph or thickening on the bowel in the neighborhood of the fistula was dissected off. It was then found that the calibre of the gut was only slightly narrowed, and this was apparently caused by the suture introduced longitudinally at the beginning of the operation to close the opening in the bowel. This suture was therefore cut and removed, and the opening into the bowel re-sutured transversely (instead of longtitudinally) as is recommended in the operation of pyloroplasty, and first practiced by Heineke, of Erlangen. A second continuous Lembert suture was introduced, and for further security against leakage a piece of omentum was brought like a cuff around the bowel and sutured on either side to the mesentery.

Lastly, the old cicatricial tissue in the abdominal wall was cut away and the wound closed.

February 20.—Temperature 98, pulse 100. Patient passed a fair night and suffered very little pain. Flatus passed per rectum.

February 21.—Patient feeling well, and asking for food. Pulse and temperature normal.

February 23.—Patient feeling well and hungry. No distention. Flatus passing. Six tablet triturates Hydrarg. Subchlor. gr. 1-10 were ordered, one to be taken every hour, to be followed by a saline.

February 24.—Patient feeling perfectly well. Has had two large natural stools. From this time on his recovery was rapid and complete, his bowels moving twice daily without medicine. The stitches were removed on March 4, (thirteen days after the operation). The abdominal wound healed by primary union. Two days later the patient was up and about the ward and in excellent health.

On March 13 the patient complained of feeling poorly. He suffered from a sore throat and vomited a number of times. Temperature 102½°F., pulse 120. The following day a characteristic scarlatina-form rash made its appearance, and he was sent to the Civic Hospital, where he is now convalescing.

ANEURISM OF THE ASCENDING PORTION OF THE AORTA.—Report of Case.

By J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology University of Bishop's College, Physician Western Hospital.

Mrs. H., aged 32 years; occupation, housewife. Admitted to the Western Hospital, January 15, 1898. Notes taken January 17th, recorded by A. D. Irvine, M.D., Senior House Physician.

COMPLAINTS.—Shortness of breath, pain between shoulder blades and in both arms, especially the right. Swelling in right breast.

PREVIOUS HISTORY.—Born in Derbyshire, Eng. Was never seriously ill until she came to Canada. Has worked very hard since her arrival in this country seven years ago. No specific history to be obtained.

PRESENT ILLNESS.—Began about two years ago, by an attack of rheumatism, which confined her to bed for about one month. She had almost recovered from that when she received a fright, and putting her hand to her chest felt a pulsating tumour on right side, after which she was very short of breath, and her physician advised her entrance into the hospital. In June, '96, patient entered hospital; the dyspnoea was found to be due to an aneurism of the aorta. She was treated by rest in bed, dry diet and *pot. Iod.* for seven weeks, and improved considerably, but she had to remain in bed for nine months after leaving the hospital.

For the last seven months patient has been doing her household work, but has been troubled off and on with dyspnœa and pain in right chest; also has had pain in her arms and between the shoulder blades for the last seven months. Has been coughing for three months.

PRESENT CONDITION.—Rather well nourished, intelligent woman. Has to assume an upright position in bed on account of dyspnœa; can recline a little, but it causes a feeling of pressure in the right chest, which produces dyspnœa and causes her to cough. Cannot sleep on account of impossibility to assume a position favorable to sleep. Temperature normal.

VASCULAR SYSTEM.—Pulse visible in all superficial arteries. Rapid, but free and strong. No arterio sclerosis. Right external jugular vein somewhat enlarged.

On inspection of the chest a large pulsating tumor about four inches in diameter is seen just to the right of the sternum over the 2nd, 3rd and 4th ribs. This tumor is tender to touch, and any pressure on it causes a smothering sensation. No difference could be made out in the radial pulsations and they were synchronous. Pulsations cannot be made out in the femorals.

An oval pulsating projection is seen on the right side of the chest between the 1st space and 4th rib, extending about four inches to the right of the sternum. On palpation the mass gave evidence of great tenderness on the slightest pressure, and an expansile tumor is readily made out, reaching to the spine, and having caused erosion of a portion of the ribs and cartilages. The apex of the heart is felt in the 6th space in the nipple line. Dullness on percussion corresponds to the outline of the tumor as made out by palpation.

An systolic murmur is present, heard over the tumor and along the course of the aorta. The second sound is accentuated, and at the left side of the ensiform cartilage a diastolic murmur can be heard.

Tracheal tugging is readily made out. There is some dullness over the left lung at the apex behind, the respiratory sounds are less intense than on right side, and tubular breathing is present throughout the upper half of left lung. In the right lung breathing is vesicular, but increased in intensity.

The pupils are normal and equal. There are no abnormal unilateral skin manifestations. There is frequent cough, and the difficulty in breathing is apparently due to pressure on the bronchi, especially the left, and infringement on the space of the right lung.

GENITO-URINARY SYSTEM.—Menstruation regular. No children, but has had three miscarriages. Urine sp. gr. 1034, otherwise normal.

The patient had frequent dyspnœa attacks, which were relieved by hypodermics of morphia, gr. $\frac{1}{8}$ and strychnia, gr. $\frac{1}{30}$. Towards the end the patient passed urine involuntarily.

Between the 17th and the 22nd, while she was in the

hospital, the pulse ranged between 90 and 110, and the respiration between 25 and 35 per minute. The temperature from 97° to 98⅖°.

The patient died suddenly on the 22nd.

PATHOLOGICAL REPORT, BY DR. J. A. MACPHAIL.

The throat was opened, and all the contents removed, together with the tongue and trachea. The relation of the parts was confused till a careful dissection was made. An aneurismal tumor was found extending from its site upon the ascending arch of the aorta to the right chest wall, and having eroded the ribs it appeared beneath the mammary glands externally.

1. The site of the aneurism was upon the ascending arch, commencing just above the aortic valves, and reaching nearly to the origin of the innominate artery. The tumor itself measured six inches in diameter.

2. The opening in the chest wall was nearly circular, and measured three inches in diameter. The ribs involved were the third and fourth, a part of the second and fourth.

3. The tumor rose above the chest walls as a gently rounded mass to the height of an inch, its centre being below the middle of the mammary gland.

4. Adhesions to the edge of the bony opening were complete and firm, and the lungs were adhered in places.

5. The mammary gland and the subcutaneous tissues of the chest were much infiltrated with the transuded fluid.

6. The sac was thin but ruptured in no place, and was filled for the most part with dark clot, which in no place was well organized. The remainder of the cavity contained fluid blood.

7. The aortic valves were not excessively damaged, though there were a few vegetations, and the cusps thickened and curled at the edges. The mitral valves were thick and the muscles powerful. The heart was hypertrophied though not to a high degree. The aorta was markedly atheromatous.

8. The orifice of the innominate artery was dragged into the form of a slit, the left carotid and subclavian arteries were much less deformed.

9. The bend of the recurrent laryngeal nerve was displaced downward at least two inches.

Before coming to the hospital the patient had been treated for months with iod. potassium. In regard to etiology, while there was no evidence of a general arterio-sclerosis, the post mortem examinations showed the presence of atheroma in the arch, and the dilatation doubtless began in the early stage of the process, induced by the patient's arduous work. This alone, with a predisposition to incompetent vessels, may suffice to account for her condition, but the miscarriages suggest a specific taint as an etiological factor, although her condition and history gave no direct evidence of its presence. Yet her age would suggest the probability of some such special cause leading to the early change in the central arterial system. Death was due to cardiac exhaustion.

Selected Articles.

POINTS CONNECTED WITH THE PATHOLOGY AND TREATMENT OF DIABETES.*

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MR. PRESIDENT, COLLEAGUES AND GENTLEMEN—I appear before you to-day to draw your attention to points connected with the pathology and treatment of diabetes. They constitute the outcome of the study which formed the basis of the Croonian Lectures delivered by me in 1894 and of the study I have since conducted. Disease is a deviation from health, and for its proper comprehension we require to have a knowledge of the conditions belonging to health. It is just this in the case of diabetes that it has been difficult to obtain, and the complaint has stood as one of the most inscrutable of diseases. The question first presented for solution is, How does carbohydrate normally become disposed of in the system? Next follows the question, What is it that gives rise to its unnatural escape with the urine?

Briefly stated, diabetes may be said to consist of a malapplication of the carbohydrate principles of food. Common observation teaches us that when the various forms of carbohydrate matter are taken by a healthy person with the food, they become lost sight of and contribute to the benefit of the system. The system has the power of placing them in a position to be susceptible of utilization, and they thus disappear from view with resultant good. In the case of the diabetic, however, the carbohydrate matter that

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is ingested fails to undergo proper application, and passes, instead, as sugar through the system to the urine, with which it is discharged as waste material. This is the plain statement of fact regarding the difference between health and diabetes, and what is wanted is a right understanding of the details concerned.

It has been hitherto assumed, without any positive evidence as a basis, that the carbohydrates undergo oxidation in a direct manner in the system. Liebig placed them in his group of calorifacient food-principles. In his time physiology and chemistry were not sufficiently advanced to permit of carbohydrate matter being followed after being taken as food so as to obtain information of the phenomena occurring. The first step in this direction was the renowned work of Bernard. Bernard, accepting the view that the carbohydrates are destined for the purpose of oxidation within the system, enunciated the doctrine that the liver is endowed with a glycogenic function which provides a supply of sugar to be conveyed to the tissues for oxidation when carbohydrate matter is lacking in the food. I need not give attention here to the faulty groundwork upon which the glycogenic doctrine was raised. This matter has in times past been amply dealt with. Notwithstanding, however, that it is recognized that the experimental groundwork is fallacious, the doctrine has become so firmly implanted in the mind as to render effacement difficult. Apart from other considerations, what it implies affords its condemnation. In order that sugar may reach the tissues for oxidation, it must enter the general circulation. Now it happens that the stream of blood alleged to convey sugar to the tissues for destruction in part goes to the kidney. It was formerly taught that the capacity existed of tolerating a certain amount of sugar in the blood without its passing off with the urine, and this tolerating capacity was asserted to have been found in the dog to stand good for a proportion of 2.50 per 1000 ; in other words, when sugar amounted to 2.50 per 1000 in the blood, sugar escaped with the urine, but not when a less proportion existed.

At that time neither for blood nor for urine were the analytical methods for the recognition and determination of sugar in the satisfactory position in which they stand now. Modern physiologists are agreed that the amount of sugar normally present in blood is about, or a little under, 1 per 1000; and in association with this it can be definitely stated that sugar passes into the urine. It can also be definitely stated that in association with 2.5 per 1000 of sugar in the blood such an amount passes into the urine as to give it a pronounced saccharine character. The question of the presence of sugar in normal urine long stood, or was considered to stand, as a debatable point. The discussion on the subject that took place in the pages of *The Lancet* a few years back, in which I took part, will probably be remembered. The method formerly adopted for separating the sugar from the urine and obtaining it in sufficient quantity for its satisfactory identification was by precipitation with lead acetate and ammonia. Operating upon the product yielded by this process, I obtained information which left no doubt in my own mind that sugar constitutes an ingredient of healthy urine. More recently Baisch and others have operated with benzoylchloride. By this reagent sugar may be precipitated

and can afterwards be recovered in a pure form. From the evidence that has been obtained the matter may be considered to have been thoroughly set at rest. Not only, indeed, can it be said that sugar has been found, but likewise that its nature has been defined.

The point to which we are led is that no tolerating capacity exists against elimination by the kidney of sugar present in the blood. As it is present so it escapes, and the urine thus becomes a delicate indicator of the condition of the blood. By experiment it can be shown that sugar introduced into the circulation is at once revealed by the urine. I have found that even as small a quantity as a quarter of a gramme per kilo, body-weight—that is, a four-thousandth of the weight of the animal—intravenously injected has given evidence of influence upon the urine. Where larger quantities are used a more or less pronounced elimination occurs, and the blood even an hour afterwards has not regained its normal constitution, but still retains a surplus of sugar. This tells against the assumed destruction in the systemic capillaries being the natural mode of application of sugar in the animal economy. It is sufficiently evident that the kidneys constitute the channel through which the sugar permitted to reach the circulation in diabetes is discharged from the system. The action of the kidney in relation to sugar is not different in health from that in diabetes. The only difference is one of degree determined by the difference in the amount of sugar existing in the blood. It is not surprising that in former times healthy urine was regarded as being free from sugar. The quantity is too minute for the chemical methods then at command to reveal. With the improved methods of the present day, the sugar which is present in healthy urine, and is derived from the small amount naturally existing in the blood, is readily susceptible of demonstration.

From the considerations that I have mentioned it is permissible to look to the urine for the supply of knowledge regarding the entry of sugar into the blood of the general circulation, and to reason as follows in relation to the glycogenic doctrine. Under natural circumstances the blood contains a certain small amount of sugar which may be considered as constitutionally belonging to it, just as is noticeable with the other constituents of the body. Physiologists are agreed that the amount of sugar in the blood is not altered by the amount of carbohydrate ingested. Within ordinary limits, both the blood and the urine remain uninfluenced by the character of the food with respect to carbohydrate. It matters not whether the comparatively insignificant amount of carbohydrate existing in an animal diet or the large amount contained in many articles of food from the vegetable kingdom be ingested, the result is the same. But could this be the case if the ingested carbohydrate had to be conveyed as sugar through the general circulation to the systemic capillaries to be there disposed of? It would mean that, notwithstanding the demonstrable fact that whilst the introduction of an exceedingly small amount of sugar into the circulation gets revealed by the urine, a surpassingly large amount can reach it from the food without evidence being afforded of its doing so. The circumstances are such that whatever presumably passes to the tissues for destruction would equally pass to the kid

ney for elimination. If the kidneys were placed on the other side of the systemic capillaries there might be destruction without elimination. But it is the same stream that goes to the systemic and to the renal capillaries, and for the teaching to hold good it would have to be assumed that destruction could proceed and elimination remain in abeyance. By the ingested carbohydrates being temporarily stopped by the liver and stored as glycogen, the difficulty is not removed. Within a given time the transit would have to be made, and the amount transported under a free carbohydrate diet would be infinitely greater than could be derived in any way from animal food, and yet it escapes, being revealed by the urine.

What the quantity is that would have to pass may be judged by the difference in the amount of sugar eliminated by the diabetic patient partaking freely of carbohydrate materials on the one hand, and upon animal food only on the other. Everyone knows the immense difference existing, but I may mention in illustration the figures drawn from a case in which many years ago I specially studied the effect of different kinds of food on the elimination of sugar. The sugar voided during a twenty-four hours' period on a diet exclusively of animal food stood at 37 grammes, while for a similar period, with a diet containing a plentiful supply of carbohytrate material, it reached 685 grammes. This gives an idea of the amount of sugar that would have to traverse the circulation if the carbohydrate matter of our food had to be conveyed as sugar to the tissues for destruction. And yet, in the healthy state, the urine escapes without any effect being produced upon it.

If in reality the functional transit did take place, it could not fail to be rendered conspicuously evident by the urine. The transit, indeed, is just what belongs to diabetes, and I submit that this consideration is fatal to the glycogenic doctrine. For freedom from diabetes, carbohydrate matter must be prevented reaching the general circulation as sugar, instead of being thrown into it as such for conveyance to the tissues for destruction.

And now the problem that presents itself for our consideration is: In what way does the carbohydrate matter of our food become disposed of so as to be prevented reaching the general circulation as sugar? Any explanatory proposition that is offered must necessarily locate the seat of the disposal as standing between the alimentary canal and the point where the portal blood-stream obtains entrance into the general circulation. If it were located beyond this point, unless the capacity existed, which may be confidently said not to be the case, for effecting an instant removal of sugar directly the general circulation is reached, the conditions would be supplied for the urine to be influenced as it is found to be in the diabetic state.

What I have to say with reference to the mode of application of carbohydrate matter within our system fits in with what is observed to occur throughout living nature. The operations of animal and vegetable life are brought into harmony with each other. In one of the simplest of organisms—namely, the yeast-cell, a demonstration is afforded of the occurrence of the operations which I submit lead to the carbohydrate matter of our food being disposed of in our system without the opportunity being given of its reaching

the general circulation as sugar, and thence escaping as waste material with the urine. It is only gradually, and as the result of life-long attention devoted to the subject, in association with unceasing laboratory work, that the knowledge has been acquired upon which the new doctrine is based. Much help has been afforded by the teachings of experience in connection with diabetes; and while these are absolutely irreconcilable with the old doctrine upon which physiologists have been relying, they, in the most complete manner, fall in with and give support to the new one. The subject is fully considered in my work on "The Physiology of the Carbohydrates," published in 1894; and it will only be requisite here to enter into sufficient detail for the comprehension of what is being spoken of.

The carbohydrates, as we know, are susceptible of being transmuted from one to the other by increased and decreased hydration. Ferments and chemical agents move them in the former direction, and the operation is one that we have the power of inducing at will. Transformation in the latter takes place to an unbounded extent in the living world, but if we exclude a few special instances of laboratory achievement, we have not the power ourselves of bringing it about. The first influence exerted on ingested carbohydrate is by the ferments of the alimentary canal, which hydrolyze and carry the insoluble into a soluble form and thus prepare for absorption. On being absorbed the carbohydrate is brought within the sphere of influence of living matter. In the villi, which constitute the seat of absorption, there are active cells with which the absorbed carbohydrate falls into close relation, and subsequently it permeates the cellular structure of the liver, which thus, as it were, stands in a position to exert a supplementary action, and to complete before the general circulation is reached, whatever may have escaped completion in the villi.

Now, by the agency of protoplasmic action, or the power possessed by living matter, carbohydrate is (1) transmuted to a lower form of hydration; (2) transformed into fat; and (3) synthesized into proteid. All these operations can be definitely shown to take place in the simple cell-organism of yeast as the result of the power with which its protoplasm is endowed, and the power here represented is nothing more than the common property possessed by protoplasm in general of both kingdoms of nature. While ferment-action hydrates and breaks down, protoplasmic action dehydrates and builds up; and it is by the influence of this latter power, I contend, that carbohydrate naturally becomes disposed of in the system, instead of by ferment-action leading to the production of sugar that is fictitiously assumed to undergo oxidation while traversing the systemic capillaries.

Between the seat of absorption and a point short of the general circulation being reached by the portal stream of blood, I say, we have to look for the disposal of the carbohydrate derived from our food, and it is by the exercise of protoplasmic power that what occurs is brought about. Ferment-action has performed its office within the alimentary canal in putting the carbohydrate matter, if it should be in a form to require it, into a fit state for absorption. If the disposal is completely accomplished, no sugar is left to reach the general circulation, and if none reaches the general circulation there is none to reach the urine. This repre-

sents the natural order of things. If, on the other hand, the disposal of carbohydrate by the exercise of protoplasmic power should not be properly effected, if, in other words, the circumstances should be such as to lead to the faulty accomplishment of protoplasmic action; or if, even with a natural state existing as far as the system is concerned, it should happen that the function is unduly taxed by the ingestion of an exceptionally large amount of carbohydrate in a readily absorbable form, especially at a period of fasting, sugar will be permitted to reach the general circulation, and in proportion as this occurs sugar will be found in the urine.

The process of transmutation into the lower state of hydration is exemplified by the production of glycogen in the liver. Carbohydrate which escapes being transformed into fat or synthesized into proteid passes on to the liver, and here, according to the evidence presented, it may be looked upon as undergoing in the first instance the change of state referred to. It is well known to physiologists that the liver becomes charged with glycogen in proportion to the largeness of supply of carbohydrate with the food. Possessing the colloidal property that belongs to it, it forms a serviceable storage-material, which, placed in the position it is, is favorably situated for being gradually utilized by transformation into fat, and possibly synthesis into proteid. That it should be destined to come back into sugar to be discharged into the general circulation and conveyed as such to the tissues for oxidation is incompatible with the condition in which healthy urine is found.

It was a subject of dispute in former times whether animals possessed the power of forming fat from carbohydrate. The matter is not now open to question. The power, indeed, is largely turned to account by those engaged in husbandry for the fattening of animals for the table. In the practice of our own profession if we want to reduce obesity we advise the restriction of carbohydrate articles of food, and conversely we recommend that they should be freely taken if we wish to fatten. For many years the state of the lacteals of the rabbit after a meal of oats has been fixed on my mind. Formerly it stood unintelligibly before me, but now I think the meaning is to be read off. It is common knowledge that after fatty food the lacteals, of the dog, for instance, are to be found conspicuously injected with milky chyle. In the rabbit, when in a vigorous but not when in a poor or sickly state, fed on oats and taken at the proper time afterward, I have seen the lacteals about as fully injected with milky chyle as in the dog after fatty food. Oats in their dry state contain about 5 per cent. of fat, which I am convinced upon full consideration of the matter is altogether inadequate to account for what is observed. The extent to which the villi under the circumstances are charged with fat-globules I have represented by photo engravings from microphotographs in my work on "The Physiology of the Carbohydrates." It is admitted that animals are fat-producers from carbohydrate, and with its production in the villi it reaches the system and subsequently passes on in precisely the same way as fat derived from without. In the one case we have to deal with fat emanating from a ready-formed supply, and in the other with fat formed by the protoplasmic agency of the cells of the villi, for it is not for a moment contended that what occurs is of the nature of a

mere chemical transformation. As carbohydrate may happen to be here applied to fat-production, so have we a provision in the direction wanted for preventing its reaching the general circulation as sugar. There are grounds also for believing that a further formation of fat is effected by the protoplasmic agency of the cells of the liver.

That carbohydrate can be turned to account in contributing to proteid-production is demonstrated by the growth of the yeast-cell in a medium containing no other source than sugar for the carbon constituent of its protoplasm. Further, carbohydrate is susceptible of being cleaved off from the proteid molecule. The proteids entering into our constitution do not enter the system in a ready-formed state. The proteid matter of food is as a first step towards its application to the purposes of life broken up by the ferment-agency of digestion. The absorbed products of digestion then fall into relation with the living protoplasm of the cell of the villi. Peptone, which is recognizable previous to the occurrence of absorption, now becomes lost sight of, and in view of all the circumstances existing it may be taken as reasonably permissible to conclude that through the instrumentality of protoplasmic action an extensive building up of proteid goes on in the villi.

By synthesis into proteid carbohydrate matter is placed in a position to be susceptible of transport through the system without running off with the urine. At the same time it is evident that its liberation from the locked-up state into a free form can be most easily effected in the presence of suitable conditions. The lactose of milk cannot, reconcilably with our collateral knowledge, be conveyed as such to the mammary gland, but must constitute a cleavage-product resulting from the effect of—may it not be said—ferment-agency existing within. In the grave form of human diabetes, as well as in the experimentally induced phloridzin and pancreatic diabetes, sugar is drawn from a source other than the food, and the large quantity that can be eliminated testifies to the abundant store of locked-up carbohydrate that must exist ready to be set free when the requisite agent for effecting the purpose is present, just as the sugar in amygdalin is set free in the presence of emulsion.

What has been said of the villi gives them the assimilation of food; a process that may be naturally looked for to immediately follow absorption. At a period of fasting, the amount of sugar in the portal blood practically stands in accord with that in the blood of the general circulation. After the copious ingestion of carbohydrate food, the amount of sugar in the portal blood rises, and I have known it reach as high as between 4 and 5 per 1,000. The circumstances are such as to lead to sugar being absorbed in too large a quantity to be fully assimilated or disposed of in the villi, and the portion that has failed to be assimilated reaches the portal blood and gives to it a fluctuating condition dependent upon the food. If there were no further provision existing for the purpose of assimilating this sugar and checking its passage into the general circulation, we should be thrown into a more or less pronounced glycosuric state after every meal, in precisely the same way as, in fact, occurs with the subject of alimentary diabetes. The liver, however, intervenes between the portal vein and the general circulation,

and here a supplementary action is performed, which, if complete in checking the flow of sugar onwards, protects the contents of the general circulation, and hence the urine, from being influenced in relation to sugar by the food ingested. If the supplementary action is incomplete, the blood and urine become influenced, and in proportion to the incompleteness so is the extent of glycosuria. The entry of sugar into the general circulation constitutes the unnatural and not the natural occurrence. In order that we may be kept free from glycosuria, sugar must be kept out of and not thrown into the general circulation.

Whatever may be the means by which it is effected, it may be regarded as certain that to keep the sugar proceeding from the food out of the urine it must be kept out of the general circulation. The power by which this is accomplished falls within what we understand to be meant by the term "assimilative power," and it is through this power being at fault that in diabetes sugar gets into the urine from the food. In proportion as the power in question is diminished so is there a diminution in the amount of carbohydrate that can be taken without influencing the urine.

The position of things may be exemplified by a vertical column, representative of the power under consideration, with the maximum degree of power, or that belonging to health, standing at the top and successive stages of decrease, corresponding with what may be found to exist in different cases of diabetes, following on below until we arrive at the bottom where the power is *nil*. The maximum power is such as to be sufficient for providing for the disposal of the carbohydrade that is taken within ordinary limits; and thus it happens that under these circumstances no influence is exerted upon the urine. If carbohydrate, however, should be taken to an undue extent, and especially if introduced into the stomach in a soluble form and at a period of fasting, the tax upon the assimilative power surpasses the capacity to meet it, and as a result, notwithstanding we are in the presence of a healthy system, a portion escapes being disposed of, and is permitted to reach the general circulation as sugar, and in this state to find its way into the urine. This may be looked upon as the explanation of the saccharine urine, which it is known can be induced in both man and the lower animals by excessive ingestion of carbohydrate.

With rather less assimilative power existing than is normal, a given amount of carbohydrate that can be taken by a healthy person without producing any noticeable effect gives rise to glycosuria. Cases of this nature are not infrequently met with in practice, and prove perplexing to the medical man and to the patient. By one practitioner the patient is told that there is sugar in his urine, and for a while he may be inspired with gloomy forebodings. He possibly later on seeks the opinion of another practitioner, who pronounces his urine to be perfectly right, and by this he is consoled till it arrives that he is afterwards told again that there is sugar in it. This apparently puzzling state is entirely due to the amount of carbohydrate that may happen to have been ingested just previous to the urine being examined. When in excess of a certain limit, sugar is voided; when, on the other hand, below it, no sugar is found, the assimilative work to be performed being within the capacity existing for performing it. Like to what has been said with

regard to the healthy person, saccharine and nonsaccharine urine follow in response to the particular amount of carbohydrate ingested. The only difference between the two cases is that an amount of carbohydrate that suffices to lead to the production of saccharine urine in the glycosuric does not suffice for doing so in the healthy person. It is to be remarked that the effect is noticeable within two or three hours after the food has been taken. Before the meal there may be no sugar in the water, and a short time afterwards a more or less notable amount may be discoverable. These are the cases that are frequently referred to as cases of intermittent diabetes; the intermittent character noticeable is due to variations that may happen to occur in connection with the food.

So it runs on. Different grades of power are met with in different cases, and it is found that an amount of carbohydrate that one glycosuric may be able to take without its leading to the passage of sugar suffices to determine its escape in another. The person has his fixed limit of power, just as we, as healthy subjects, have, but the limit of power stands lower, and is of varying degree in different cases. In each instance, as long as the carbohydrate taken is within the capacity existing of assimilating or properly disposing of it the urine remains uninfluenced; whilst, when the capacity has been exceeded, sugar becomes discoverable, the quantity standing in relation to the extent to which the capacity has been surpassed.

A case at a given time may be advancing in the direction of loss or in the direction of gain of power; but, taken at other times, the steadiness that is noticeable from day to day, week to week, month to month, or even year to year is most striking. The patient has his fixed point of assimilative power. In addition to the restricted diet for the diabetic, he may be able to take a certain weighed quantity of ordinary wheaten bread without sugar appearing in the urine. In other cases the quantity that can thus be taken may be larger and larger. The limit belonging to the case is ascertainable by observation, and subsequently the state of the urine will depend upon whether carbohydrate is taken to a greater or to a less extent than the equivalent of that contained in the specific quantity of bread found to be permissible. When the patient is living close up to his boundary-line, sugar is apt upon occasions to be met with. This, from the variation that is liable to occur in his daily food looked at in its entirety, is only what may be reasonably expected. When, however, thoroughly below his boundary-line, there is sufficient assimilative capacity to spare to cover any little variation, and prevent the urine being influenced.

It is not for a moment to be understood that in the restricted diet there is a complete exclusion of carbohydrate matter. Even purely animal food contains a certain amount, and in the substitutes for bread variable quantities according to circumstances exist. All that can be accomplished is to carry the exclusion as far as is practically consistent with the provision of a supply of food that the patient can satisfactorily eat and subsist upon.

As the object of the restricted diet is to reduce the supply of carbohydrate matter so that, if possible, it may fall within the assimilative capacity existing, it is of paramount importance that we should be able to rely upon the articles that are sold to take the place of bread. Without security in this matter the dietetic treat

ment of diabetes may not merely prove fruitless, but at the same time absolutely misleading to the medical practitioner. Unfortunately either from ignorance or unscrupulousness, articles are put into the market for sale as appropriate food for the diabetic which are literally no more suitable for the purpose than the food they are designed to replace. Both medical man and patient require to be vigilantly on guard to escape from the infliction of grievous physical harm and subjection to vexatious disappointment. Even with foods of the better-class character considerable variation exists in the produce (particularly the gluter-flour and thence what is derived from it) of different makers, and want of success in treatment may result from the article employed not being of the degree of purity looked for. Fortunately, the high-class makers of diabetic foods in this country are fully alive to the importance of conscientiously attending to the question of purity, and the more this is realized and acted up to the better the position in which the medical practitioner is placed. It must be acknowledged that the matter is not devoid of difficulty. Palatableness has to be looked to, and ordinarily palatableness suffers at the expense of purity. The art called for is to produce food which is palatable and at the same time suitably constituted to meet the requirements of the complaint. The producer has at one and the same time to use his endeavors to please the patient and satisfy the physician, and amongst those who have exerted themselves in a right way to attain the object desired, I consider Mr. Callard deserves to be mentioned.

The state of the urine constitutes a tell-tale in relation to the food that has been taken, and errors in diet, in whatsoever way occurring, are unfailingly revealed. A reliable quantitative determination of the sugar is, of course, required for the purpose, and with a specimen of urine taken for examination from that passed on going to bed at night, and another from that passed on rising in the morning, the one being under the influence of the food of the day and the other under that of fasting during the night, we obtain a disclosure, if there is any to be made, of the effect of what has been ingested. The night specimen is under the influence especially of the food taken in the latter part of the afternoon and the early part of the evening, and from this circumstance it is not infrequently found to contain sugar whilst the morning specimen may be free. On the other hand, should food be taken shortly before bedtime—in other words, should the last meal be a supper at the end of the evening instead of a dinner at the early part of it, the position may be reversed through sufficient time not having elapsed for the night specimen to be influenced, and the effect of the food being thrown instead on the morning specimen. Under such circumstances, sugar may be found in marked amount in the morning urine, and less or none in that passed at bed-time. So sensitive is the urine to the influence of food, that in the case of a glycosuric requiring a strict observance of the restricted diet for maintaining the urine in a sugar-free state, the starchy matter contained in a thin water-biscuit may suffice to impart to it a distinctly saccharine character. Whatever the nature of the article containing the carbohydrate, it equally tells upon the urine, but on account of the solubility of sugar in contradistinction to starch, articles containing the former produce a more speedy effect than those containing the latter. I

need not dwell upon the delusion so extensively prevalent that toast from bread is allowable when bread itself is not, or that the starchy matter of the potato stands in a different position from that from other sources.

Removal of sugar from the urine by reducing the carbohydrate taken does not mean cure of the disease. What is wanted for cure is restoration of the assimilative power; and in proportion as this is brought about, so can more and more carbohydrate be taken without leading to the passage of sugar. If, indeed, in a diabetic case the power should become fully restored, the patient would be placed in a position to be able to take the ordinary diet without its influencing his urine, and he might then be truly told that he had shaken off his complaint.

But control of the elimination of sugar by diet is of paramount importance in promoting improvement, and may be looked upon as an indispensable measure of treatment. It is not the mere fact of the waste of food occurring with the discharge of sugar that constitutes the great source of trouble in diabetes. It is the state of system which stands as a preliminary factor to the elimination that occurs. The blood forms the connective link between the urine and the food. The sugar present in the urine has previously passed to it through the blood, and in doing so has created in this fluid a deviation from the natural state which tells injuriously throughout the entire system. It is not natural for the blood of the general circulation to contain more than a certain small amount of sugar—an amount varying but little under healthy circumstances. With the presence of an increased quantity as a result of the faulty assimilation of the carbohydrate of the food it is thrown into an unnatural state, and its constitution altered in such a way as to interfere with its fitness for administering to the proper performance of the nutritive and various other processes of life. All the symptoms and the results of the complaint depend upon the unnatural presence of sugar in the contents of the circulatory system, and on this condition being altered, as it is shown to be by the disappearance of sugar from the urine, the symptoms and ill effects immediately subside. It may then be said, that so long as this state can be maintained the patient has nothing to fear from diabetes. Diabetic coma is the condition most to be dreaded as an issue of the disease. With the sugar in an uncontrolled state the condition is liable at any time to supervene and speedily carry off the patient. If any other complaint of an acute nature, as influenza, pneumonia, etc., should set in, great danger is incurred of a fatal termination through the supervention of diabetic coma. A diabetic in the great majority of instances does not die in a direct manner from the superadded complaint, but from the development of diabetic coma. Not so, however, when the elimination of sugar is thoroughly under control. Such a patient is to all intents and purposes, except in relation to food, in the same position as an ordinary person. In all my experience I have never come across the supervention of diabetic coma in a case where the urine has previously been in a sugar-free state.

To control the escape of sugar by adaptation of the diet is only a rational procedure, and cannot be otherwise than right. There is a diminished assimilative power existing, and to bring the

conditions to a properly balanced state there should be a corresponding diminution in the class of food calling for the exercise of the power. When the amount of carbohydrate matter of the food is shaped so as to be properly adapted to the power existing of disposing of it, there is no disturbance of the required harmony between the two, and the system escapes being prejudicially influenced by the effect of the deficient power that has to be dealt with—escapes, in other words, being thrown into an unnatural state by the presence within it of sugar which ought not to be there. The passage of sugar that can be controlled by reduction of ingested carbohydrate means neither more nor less than the unnecessary infliction of harm, and the harm inflicted stands in proportion to the amount of sugar that is allowed to reach the system, and thence to escape with the urine. The fact of the voidance of sugar affords evidence that the system is already overburdened with carbohydrate, and any addition will have the effect of increasing the abnormal condition existing. If the case is one in which the sugar in the urine is not susceptible of removal, its reduction in quantity does good by establishing within the body a closer approach to the natural state.

As I have asserted, what is to be sought for by treatment is the restoration of assimilative power over the carbohydrates, and this is often demonstrably attainable. Let me give an illustration of the kind of case I am not infrequently meeting with in my experience. A patient, say above middle age, has become diabetic, but from some cause or other does not happen to fall under proper treatment until he has reached a very bad state. His symptoms have been persistently growing more and more marked, and at the time of falling under observation he may be suffering from great thirst, passing an enormous quantity of urine, and having become much reduced in weight and strength. We will suppose that he is placed on the restricted diet, which is loyally attended to, and that codeine, opium, or morphine is administered. Even within a few days a very marked change is produced. The thirst and excess of urine subside, and the patient picks up in weight and strength. The sugar falls and ultimately disappears. In some instances this happens with surprising rapidity, but in others it may not be till after the lapse of some days or even of a longer time than this, that the urine is found to have lost its saccharine character. The satisfactory progress continues. The patient feels as though he had shaken off his complaint, and perhaps wonders why he should have to keep to his measures of treatment. Any relaxation in diet, however, would immediately lead to a return of sugar. The power of disposing of carbohydrate matter has not yet become restored. For a while the improvement is well maintained, the weight, which in the first place underwent increase, being afterwards kept up. Later on, but when cannot be foretold, a change may set in which is not unlikely to excite gloomy forebodings by leading to the apprehension that a relapse has occurred. It may be at the end of some weeks, or more likely months, a decrease of weight may set in, and the patient may feel weaker and be reminded of the state that existed before the treatment was commenced. If with this alteration the urine continues free from sugar, it may be read off as a sure sign that a restoration of assimilative power has

commenced to take place. A return to ordinary food would indubitably bring back the sugar. The improvement of power that has occurred is only likely to be slight, and requires to be met by a correspondingly slight allowance of carbohydrate matter. It appears to me that bread is the article most missed from the ordinary dietary, and this therefore I am in the habit of suggesting for employment as the representative of carbohydrate food. I begin with 3 ozs. per diem in portions of 1 oz. at each of the three principal meals. Under the circumstances depicted it may reasonably be expected that no sugar will be made to appear in the urine, and such being the case, in the course of ten days or a fortnight a trial is made of 1½ ozs. in place of 1 oz. three times daily. This also is ordinarily found to be tolerated, the indication of toleration being that the carbohydrate does not pass off as sugar. Interesting to note, with the administration of the bread the patient immediately begins to recover his lost weight and to feel himself again. Later on another drop in weight may occur, and it is to be taken as an indication for a further increase of bread. In this way I frequently work up during a space of, it may be, two or three months to 7 or 8 ozs. of bread per diem. I sometimes find that the capacity exists for the quantity to be raised to 9 or 10 ozs., and I have known cases where I have been able to proceed as far as 12 ozs., and upon rare occasions a greater latitude of diet than even this involves has been unattended with the passage of sugar. If sugar should appear in the urine it must be looked upon as meaning that the mark has been overstepped and that a retrogression must be made to the quantity found to be tolerated.

Let us for a moment pause and give thought to what the return of the capacity of taking carbohydrate matter without its escaping as sugar implies. To begin with, for a while there may be a passage of sugar with the limited supply of carbohydrate associated with the restricted diet. Then this sugar disappears, and next more and more carbohydrate can be taken without running off from the system as sugar with the urine. Surely this must indisputably mean that the system has regained a power that it had previously lost.

An important principle is involved in connection with what I have just set forth, and the facts stand in harmony with what may be rationally looked for. It is certainly a notable point that everything should work out as harmoniously as it does. The effect of carbohydrate food in health is diametrically opposed to its effect in diabetes. In health, as we well know, it contributes to the increase or to the maintenance of weight. In diabetes where sugar is being voided it does exactly the reverse. If it runs off as waste material with the urine it naturally cannnot be expect to go towards maintaining or increasing weight. As a matter of fact, it leads to decrease of weight through waste occurring, and the wrong state of system induced by the abnormal presence of sugar in transit from the food to the urine. Who has not noticed the marked decline of weight that occurs in a diabetic before subjection to dietetic management and the rise that immediately follows its adoption? The circumstances in diabetes, then, are such as to lead to the supply of carbohydrate producing a loss, and restriction from it a gain of weight. The healthy person on the other hand

gains weight upon its full supply, and loses weight if the supply is restricted. Now, in proportion as his assimilative power becomes raised, so is the position of the diabetic brought into conformity with that of the healthy person, and so is the necessity created for his being similarly dealt with. As long as carbohydrate food fails to be utilized its supply does harm. Directly the system regains the power of utilizing it, it is found, as in the case of the healthy person, that it is wanted, and that if it is not supplied, the want is betokened by a decrease in weight and a decline of strength. The principle to put into force is to give it short of producing saccharine urine; and decreasing weight with sugar-free urine may be read as meaning that the supply is not equal to what is permissible and, moreover, wanted.

In cases where the assimilative power is not recovered, observation shows that the restricted diet is borne without the occurrence of loss of weight, and it is permissible for me to state that the circumstance may be safely taken as a guide in practice. I know of patients who have gone on for years with the restricted diet with a thorough maintenance of weight. They are not the patients to bear the supply of bread. The system cannot want or be benefited by that which it has not the power of properly disposing of but allows to run off as waste material with the urine. It is only that which can be properly disposed of that can render service to the system.

The loss of weight attendant upon unneeded restriction from carbohydrate food may afford assistance from a diagnostic point of view. If, at starting, the case has not been properly diagnosed, and it should prove to be one where from simply undue concentration of urine, the high specific gravity and the slight indication of reaction with the copper-test often met with under the circumstances, an erroneous inference has been drawn and the patient has been unnecessarily put on the dietetic management for diabetes, a loss of weight, sometimes of a marked nature, will ensue. Equally also, loss of weight will ensue if the case is one of mild glycosuria, and it is treated as one of ordinary diabetes. Rightly appreciated, the result noticeable will be suggestive that curtailment of the supply of carbohydrate matter is being carried to un uncalled-for extent

From the remarks I have made it will be gleaned that food stands as the great factor in the treatment of diabetes. As I have stated, the object really before us for attainment is restoration of of assimilative power. My experience leads me in an explicit manner to say that I believe this is promoted by the medicinal employment of opium or its alkaloids, and I think the view accords with the result of the general experience of others. The older physicians, before the dietetic management of diabetes stood in the position it does now, empirically arrived at the conclusion that an amelioration accrued from the administration of opium.

Although the great factor in relation to the amount of sugar eliminated, food is evidently not the only one. The pathological condition which stands at the foundation of the wrong action constituting the immediate source of the elimination is presumably influenced by incidental circumstances. In many cases, it is true, it may be noticed that the assimilative power stands with remarkable constancy at a fixed point for a prolonged period, but in others

evidence is presented pointing to the patient being liable to be influenced by collateral conditions, especially of a mental nature, having the effect of altering to a greater or less extent the amount of sugar eliminated upon a given quantity of carbohydrate when sugar is being passed, and of leading to a certain amount of elimination when the urine has previously been in a non-saccharine state.

The phenomena I have hitherto been speaking of belong to what is appropriately styled the alimentary form of diabetes, which I would certainly say from my own experience is far more common than the other, but at the same time is not the form that most frequently finds its way into the wards of the hospital. Besides the cases controllable by attention to food, we meet with others in which no amount of dieting will remove the sugar from the urine. These present us with the classical type of the disease, and may be grouped into what may be called the grave form of diabetes—a form belonging especially to the period of life below middle age. A superadded condition exists which leads to sugar being derived from the tissues as well as from the food. The glucoside constitution of the nitrogenous principles of the body supplies an intelligible source for sugar, all that is wanted being a pathologically developed ferment possessing the power of breaking them up with the liberation of their sugar molecule, just as occurs with amygdalin in the presence of emulsion.

Cases progress from the alimentary form into the grave form, and it is upon the extent to which the progressive tendency exists that the issue depends. Amongst persons above the middle period of life the progressive tendency is usually susceptible of being held in check; and often, as I have shown, progress even in the opposite or right direction is to be brought about. I think it may be definitely said that allowing the complaint to run on in an uncontrolled state promotes the passage from the alimentary into the grave form, but undoubtedly there is nothing like the same proneness for the occurrence of the passage amongst elderly that there is among young people. It is indeed the strongly marked progressive tendency that gives the formidable nature to diabetes in young subjects. A striking analogy is presented to the progressive diseases of the nervous system; and—but this is a point that time precludes my entering into—may we not have at the foundation of diabetes a wrong nerve-condition implicating and operating through the vaso-motor system? In its early stage, the complaint may be just as controllable in a young as in an elderly person, but as time goes on, the difference becomes manifest, and it is found in the former that through the advance that has insidiously taken place the measures that before produced a satisfactory state no longer succeed in doing so. The rate of progress may vary considerably. In some cases with an inherited history I have known it extend over many years.

And now, Mr. President and gentlemen, let me in concluding this lecture express the hope that I have succeeded in clearly placing before you what is in my own mind as the outcome of the lifelong attention I have given to the subject upon which I have addressed you. The views I have set forth have sprung entirely from experimental physiological work on the one hand, and from practical experience in connection with diabetes on the other.

With this foundation, they harmonize with the assemblage of facts to be dealt with belonging alike to physiology and pathology; and, at one and the same time, they bring the whole matter into a state of great simplicity, and supply a working basis upon which the treatment of diabetes may be rationally and reliably conducted. With the glycogenic doctrine the teachings of diabetes are absolutely irreconcilable, and it may, moreover, be said that modern research has removed the support upon which it was originally based. And yet the doctrine still lingers in the mind, influencing its conceptions and shaping its views, for persons seem unable to look at points belonging to the subject otherwise than through the prepossessions that have been engendered thereby. The chapter, however, will have, sooner or later, not simply to be revised, but completely rewritten; and the sooner this is done the better, I feel I am justified in saying, will it be for the right comprehension of diabetes by the medical profession.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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RESULTS OF METHODS OF TREATMENT AT THE LOOMIS' SANITARIUM FOR CONSUMPTIVES, LIBERTY, NEW YORK.

Dr. J. Edward Stubbert, the physician in charge of this institution, gives a resumé of the results of one year's work which appears in the *Philadelphia Medical Journal* of March 12, 1898. Two hundred cases were treated. 11 were in the incipient stage without bacilli when admitted; 68 in the incipient stage; moderately advanced, 81; far advanced, 40. Patients in Sanitarium, 78; discharged apparently cured, 16; arrested, 13; improved, 16; unimproved, 29; died, 3. Results in patients still in Sanitarium: Bacilli disappeared in 4 cases, decreased in 17; cough decreased in 40 cases, disappeared in 7; physical signs improved in 65; weight increased, 66; remained stationary in 10; diminished in 2.

The basis of all treatment has been climatic and hygienic in this Sanitarium in all cases. The climate is well adapted to all forms of tuberculosis, as well as other troubles. The elevation, 2,300 feet, is within those limits generally conceded to be most advantageous for lung troubles; this altitude, together with the peculiarly dry atmosphere and abundance of sunlight, furnish all the conditions necessary in climatic

and hygienic treatment, not only of lung diseases, but of many others as well. Malarial fevers, which so often complicate tuberculosis in lower altitudes, are unknown, and when brought here are speedily eradicated. The situation, on top or just below the crest of the highest range of mountains between New York and the Great Lakes, with a breathing space of 50 miles lying at one's feet to the south and west, gives all the climatic advantages necessary for a fair trial of all the methods of treating tuberculosis. The writer has been fortunate enough to have visited many of the noted health-resorts of America and Europe, and, after carefully weighing the advantages of these places, he can truly say that, when an average of all the advantages is taken, the weight of evidence is in favor of Liberty for incipient cases of tuberculosis. One peculiarly rare good feature of this climate is that it shows good results in both winter and summer; the winters being long, cold, dry and exhilarating, the summers cool and refreshing.

No report can be made upon *Guaiacol*, as it was too expensive a drug to find favor among the majority of patients.

Guaiacol valerianate has, in a few cases, proved an agreeable form of administering guaiacol, but it is also expensive. Much has been claimed for this drug in the way of non-irritating properties. Our experience would tend to classify it as a less irritating drug to the stomach than creosote, but not superior to guaiacol carbonate.

Ichthyol in keratin-coated pills, two grains each, has been used with considerable success, especially in cases showing intestinal complications. The initial case was as follows: The patient had far advanced pulmonary lesions, with secondary deposits in the intestines, had seven or eight watery evacuations a day, with tenesmus, general abdominal tenderness, tympanites, etc., and could not tolerate any preparation of creosote. Keratin-coated pills of ichthyol were prescribed, with the purpose of passing the remedy to the intestines before its coating become dissolved. In a short time the evacuations were reduced to one or two a day and tenderness became localized at one point. A number of patients have since been treated with ichthyol in daily doses of from 6 to 10 grains, and the results obtained have been 10 per cent. better than those from creosote or any of its derivatives; these results are obtained in the relative effect upon weight, expectoration, cough and the disappearance of bacilli. No disturbance of digestion supervenes.

Oil of Cinnamon in daily doses of from 30 to 40 minims has been used in a few cases, with apparently good results, but there have been too few cases placed upon this treatment to make it fair to compute its relative value.

Hot-air inhalations have been given with apparent success in many cases. We use the Underwood Inhaler, and the temperature within these tubes varies according to the case, from 200° to 450° F. At present all that can be said is that in cases of mixed infection, with profuse expectoration and troublesome cough, these inhalations are especially useful, in that the expectoration and cough decrease materially. I have failed to discover any effect upon the tubercle-bacilli.

TREATMENTS.

Inhalation Cases.

Number of cases treated, 50.

Cough decreased.....	39	Expectoration decreased.	37
" increased.....	2	" increased..	3
" stationary.....	6	" stationary.	10
Taken off on account of hemoptysis	3		—
	—		50
	50		

Anti-Tubercle Serum.—At a meeting a year ago you may remember I reported a series of seven cases treated with anti-tuberculin serum, with one apparent arrest or cure. Last month that patient presented himself for examination, and I found his lungs in exactly the same condition as the day he left the Sanitarium. By referring to the table I shall read to you, it will be seen that during the past few months the results of serum-treatment upon temperature, cough, expectoration, weight and tubercle-bacilli are far in advance of those of any agent we have used. I, for one, am not ready to pin my faith to serotherapy in tuberculosis, but in the face of such facts as are and have been lately presenting themselves before me daily, both in and out of the Sanitarium, I find it necessary to cultivate a conservative spirit, lest I believe too quickly. With a common ground of climate, hygiene, food, etc., placing side by side patients treated with serum and other remedies, we are forced to acknowledge in incipient cases, with or without bacilli, that the percentage of good results in every way has been lately in favor of the former. Numerous cases, more advanced, that have not prospered under other treatment, have gained weight, reduced temperature, and expressed themselves as feeling much stronger. The comparative results in general condition, the absolute effect upon temperature and bacilli, have been really startling, and I can only say I hope they may prove true and lasting.

The serum we use is furnished by the United States Government, from the Biochemical Laboratory at Washing-

ton, D.C., and is the result of experiments made by Dr. E. A. de Schweinitz, Chief of the Laboratory. After four years of careful research he has arrived at the following conclusions:

1. That the injection of live cultures in animals is capable of producing anti-tubercle serum.

2. That this serum is probably capable of producing immunity to tuberculosis in animals.

3. That while the serum from cows thus treated sometimes produces deleterious results, *absolutely no toxic effects follow the use of horse-serum.*

TREATMENT WITH UNITED STATES GOVERNMENT SERUM IN CONNECTION WITH GREAT HYGIENIC AND CLIMATIC TREATMENT ONLY.

Number of patients thus treated, 34.

Conditions before taken.		Physical signs.	
Incipient stage	16	Improved	30
Moderately advanced	15	Unimproved	34
Far advanced	3		—
	—		34
	34		

Expectoration.		Temperature.	
Decreased	28	Decreased	21
Stationary	6	Unchanged	13
	—		—
	34		34

Cough.		Appetite.	
Decreased	26	Improved	27
Stationary	8	Unchanged	7
	—		—
	34		34

Tubercle-bacilli.		Weight.	
Disappeared	4	Increased	25
Decreased	7	Stationary	7
Stationary	20	Lost	2
Had none	3		—
	—		34
	34		

NOTE.—Besides these 34 cases, 8 have been under serum-treatment but too short a time for any report to be made.

Throat-Treatment.—A very important branch of the Sanitarium is the work in laryngeal tuberculosis. Dr. Chappell, our consulting laryngologist, will present this question to you much more ably and gracefully than I.

X-rays.—During the year we have demonstrated that in the Rœntgen rays and fluoroscope we possess accurate agents for the diagnosing of tuberculous changes in lung-tissue in their various stages, using them not only as corro-

borative factors of results arrived at by auscultation and percussion, but in some instances discovering isolated foci of infection not recognisable by ordinary methods. In addition the fluoroscope enables us to recognize more fully and accurately the degree, position and relation of areas of infiltration and consolidation ; it also delineates plainly the limit of these areas. It is unfortunate that as yet no satisfactory photographs have been taken of the images cast upon the fluoroscopic plates.

A summary of the results of our investigations at the Sanitarium shows :

1. Slight haziness indicates the beginning of tuberculous infiltration and may or may not be accompanied by dullness.

2. Decided shadows indicate consolidation, the extent of which is indirect relation to the comparative density of the shadow thrown on the fluoroscope.

3. Circumscribed spots of bright reflex, surrounded by narrow, dark rings or located in the midst of an area of dense shadow, indicate cavities.

4. Intense darkness, especially at the lower portions of the lungs, in dicates old pleuritic thickenings over consolidated tissue.

5. Pleural effusions are shown in dark shadows, the upper level of which may be agitated by succession.

6. There is no reason to doubt that the effusion of pericarditis would throw a like shadow, which would be distinguishable from the heart shadow above by its greater blackness.

7. Shadows thrown in the first and third stages of pneumonia probably resemble those of tuberculous infiltration. The shadow of the second stage of pneumonia is identical with that of tubercular consolidation.

8. In emphysema and asthma the reflex is abnormally clear, and the movement of the diaphragm is restricted.

In closing this report I wish to urge upon the Board the necessity of establishing a good laboratory at the Sanitarium in order that the profession at large may avail itself more fully of the very exceptional clinical features under the care of this Board.

ORTHOFORM IN THE LOCAL TREATMENT OF PAINFUL ULCERATIONS, ESPECIALLY OF THE UPPER AIR PASSAGES.

Dr. Eugene S. Yonge (*British Medical Journal*, February 5, 1898, *New York Medical Journal*) says that this anæsthetic presents a triple claim to recognition, in that it is

sparingly soluble, is nontoxic, and is powerfully antiseptic. On the other hand, it is a disadvantage that it will not act on unbroken skin or, with certain reservations, on intact mucous membrane, for its strong anæsthetic properties are only manifested where nerve-endings are exposed. The slow solubility leads the anodyne to exert its action economically on the tissues, and, unlike its rapidly soluble congener cocaine, only sufficient is dissolved to produce and keep up local insensibility, which therefore becomes prolonged. In from five to ten minutes after its application anæsthesia of the denuded surface to both touch and pain begins, and it reaches its consummation within a short period of time. The effect lasts from a few hours to five or six days, and there is, in the majority of cases, perfect or nearly perfect analgesia, the patient experiencing the sensation of the offending part having been cicatrized over or "enamelled." Suppuration, is usually decidedly diminished and healing accelerated.

The action of orthoform on the unbroken mucous membrane of the mouth, naso-pharynx, and larynx is, in his experience, the following: "Neither the free orthoform (basis powder) nor the hydrochloride anæsthetizes sufficiently to allow of surgical action. When it is applied to the tongue, to the inner surface of the cheek, or to the pharynx, a numb sensation supervenes in the course of about five minutes, but there is little real anæsthesia. The effect on the larynx is to reduce reflex irritability. A peculiar feeling described as similar to that produced by cocaine is experienced in five minutes; in a few minutes more this relative loss of sensation vanishes, but if before its subsidence a probe is introduced and the vocal cords and interior of the larynx are touched, although a species of "gagging" ensues, there is no laryngeal spasm or cough. In the same patient a similar procedure without the previous introduction of orthoform causes intense discomfort and a fit of coughing. The intact nasal mucous membrane is also slightly amenable to the influence of the drug. A feeling of numbness is shown in about two minutes, and this merges into real anæsthesia, which, however, is feeble and transient. The author then gives brief histories of a number of cases in which he has used orthoform.

Toxic effects, he says, were not noted in any of the cases, but there was occasionally some slight burning for a few minutes after the application of the hydrochloride. This failure to discover toxicity is compatible with the statement that over twelve drachms have been sprinkled on a broken surface in the course of the week, also that from thirty to sixty grains have been administered to rabbits, and from forty-five to ninety grains to dogs, without evil effects during life or the post-mortem discovery of visceral changes. Ortho-

form fails to produce any results on an ulcer unless the dual precaution is taken to apply the drug directly to the ulcerated surface and to insure its retention there.

No relief was experienced by patients suffering from either catarrhal pharyngitis or quinsy.

The antiseptic action of orthoform, says the author, appears to be demonstrated by the rapid diminution of purulent exudation in several of the cases encountered and the speedy healing of the ulcer. In a case of acute gonorrhœa injections of orthoform solutions were followed by the disappearance of gonococci in four days and the complete cessation of blennorrhagia.

If further observations confirm the results already published, says Dr. Yonge, it would appear that orthoform is entitled to take a position in the gamut of local anæsthetics applicable to the upper air-passages. It seems probable that it will replace—by virtue of its insolubility and innocuousness—its relative, cocaine, when long anæsthesia on ulcerated surfaces is wished for.

TUBERCULOSIS, DIABETES AND BASEDOW'S DISEASE TREATED BY RECTAL INJECTIONS OF ARSENIC.

At a recent meeting of the Société Médicale des Hôpitaux, report of which is published in the *Indépendance Médicale* for March 23 (*New York Medical Journal* April 9, 1898), M. Renaut presented a communication on the action of arsenic in large amounts. He stated that he had given enemata of five cubic centimetres two or three times a day of the following solution:

Distilled water.....840 grains;
Fowler's liquor..... 60 "

In taking three injections a day the patient received 0.15 of a grain of arsenious acid, such an enormous quantity as could not be administered by any other method. These enemata were tolerated for weeks and months.

Tuberculosis, diabetes, and Basedow's disease were three diseases which, by different modes, reached the same degree of disassimilation, and for this reason could be treated in the same way. M. Renaut had treated three tuberculous patients for a year and one for six months with the arsenic, and they were well on the road to recovery; at the present time the pulmonary tuberculous symptoms had disappeared. In the diabetic patients the strength had returned and the sugar had diminished. Very satisfying results had also been observed in those suffering with Basedow's disease. In case of any irritation of the rectum, it was necessary only to add a few drops of Sydenham's laudanum [wine of opium] to the enemata.

NEW VOLUMETRIC METHOD OF ESTIMATING URIC ACID IN URINE.

The British Medical Journal (Feb. 5, p. 346, 1898, *American Medico-Surgical Bulletin*) contains an artic'e by Dr. F. W. Tunnicliffe and Otto Rosenheim, Ph.D., on a new method of estimating uric acid in urine, based on the solubility in water of urate of piperidine, a salt formed by the action of piperidine on uric acid, with which it unites in molecular proportion.

Uric acid separated from urine and suspended in water to which a few drops of an alcoholic solution of phenolphthalein have been added, will unite chemically with a piperidine solution until all the acid is dissolved before the characteristic red color-reaction occurs between the piperidine solution and the phenolphthalein. A piperidine solution of definite strength enables the exact calculation of the amount of uric acid combined.

1. The most suitable solution of piperidine was found to be 1 to 20 normal solution. This is standardized to ascertain the amount of it required to neutralize a certain amount of 1 to 20 normal acid solution.

2. The authors obtained the uric acid from urine by precipitating it with ammonium chloride, and subsequently decomposing with hydrochloric acid. The uric acid thus obtained from 100 c. c. of urine is filtered and repeatedly washed to free from HCl, 15 to 20 c. c. of water being found enough for this washing in most cases.

3. The pure acid is rinsed with 20 to 30 c. c. of hot water off the filter-paper into a small vessel. This is brought to the boiling-point, and a few drops of alcoholic solution of phenolphthalein added. Into this the standardized piperidine solution is allowed to run from a burette. The urate of piperidine will continue to be formed and to dissolve so long as there is free uric acid. But the moment the latter is all combined the purple color-reaction will at once manifest itself.

One c. c. of a normal piperidine solution corresponds to 0.00425 gme. piperidine, which equals 0.0084 gme. of uric acid. The number of c. c. of the solution used to bring on the color-reaction, multiplied by 0.0084, will give the amount of uric acid present. Where 100 c. c. of urine are taken in the first place, the uric acid obtained will be the percentage of it in the urine.

In a table of results given by the authors, in which this method is adopted under control of the method by weighing, a variation of only 2-10 mg. was found, accounted for by the urinary pigments which increase the figures in the weighing method.

WOODBRIDGE TREATMENT A FALLACY.

Dr. R. W. Holmes writes very disparagingly about the Woodbridge treatment of typhoid fever (*Chicago Med. Recorder*, Vol. XIV, No. 2, p. 120, *American Medico-Surgical Bulletin*). When the town of Ironwood, Mich., was stricken with typhoid fever in 1893 a temporary hospital was opened, of which the writer was placed in charge. Appreciating the advantages to be derived from a thorough trial in an epidemic, Dr. Woodbridge came down to the city and secured the permission of the health-officer to use his treatment in the hospital. A thorough trial was given it under Dr. Woodbridge's personal supervision for about three weeks, and after Dr. Woodbridge's departure the method was continued on appropriate cases for some time longer. The author presents the epitomized histories of twenty-two cases from that epidemic, and the showing is certainly not in favour of the Woodbridge treatment. The claim that no complications occur under that treatment is entirely unfounded, says the author. In these twenty-two cases the treatment had to be stopped twice on account of excessive movements from the bowels, which were depleting the patients; five times salivation occurred, which is a serious matter in the typhoid state with the impaired metabolism; in two cases hemorrhage occurred; in one case it took place early in the course of the disease, and stopped on discontinuing the drugs; the other case died. Out of the twenty-two cases four died, a mortality of 18 per cent.; but, as one case presented symptoms of peritonitis before the Woodbridge treatment was begun, and died on the next day after instituting that treatment, the author eliminates it, thus making the mortality 13.6 per cent.

To the question whether the Woodbridge treatment is capable of aborting typhoid, the author gives a decidedly negative answer. From the date of commencement of the treatment, five cases had normal temperature within two weeks, four were convalescent on the fifteenth to the 21st day; the remaining nine who lived were cured in from the twenty-fourth to the fifty-second day.

The author's conclusions are as follows:

1. The Woodbridge treatment does not not abort.
2. The mortality is not influenced by the treatment.
3. Five to eight per cent. of typhoid in an epidemic of mild type, or even of medium severity, will cure themselves within two weeks.
4. A user of the Woodbridge treatment who invariably has abortive "results does not correctly diagnose all" his cases.
5. Complications are not prevented by the Woodbridge treatment.

6. A positive diagnosis is prerequisite to make statements concerning any abortive treatment valuable.

7. Believers in the abortive treatment of typhoid must bear in mind the existence of the abortive type of Liebermeister and the typhus levis of Griesinger to intelligently differentiate typhoid from the diseases with which it may be confounded.

SURGERY.

IN CHARGE OF

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THE TREATMENT OF INTUSSUSCEPTION.

Manning (*N.Y. Med. Journal*, Feb. 19, '98) advises in reducing intussusception to press on the apex of the mass, and never to use traction, as in gangrene of the part rupture is imminent. While strongly in favor of operation, he cites a successful case of his own where reduction was accomplished by a large rectal enemata with the use of a rectal tube and inversion of the child. Three attempts were made before a quart was injected, the child placed in a horizontal position and the bowels kneaded. Relief soon followed the passing of the fluid with some flatus but no fæces. About six hours after a relapse had to be treated in the same way. Three pints of the salt solution were injected this time, and were followed in a few hours by two good stools, the first occurring one hour after the fluid was passed. Since then the child has progressed rapidly to health.

THE OPERATIVE TREATMENT OF HÆMORRHOIDS.

Parker Syms (*N.Y. Med. Journal*, Feb. 12, '98) discusses the three classical methods of operation. He considers Whitehead's operation (complete resection) rather formidable, with loss of time, considerable hæmorrhage and danger of sepsis; Allingham's (ablation and ligation) excellent in most cases, but takes longer, involves a greater loss of blood, and is followed by more post operative pain than the clamp and cautery. In recommending the latter he emphasizes the necessity of stretching the sphincter, applying the clamp in the long axis of the bowel, and using the cautery at a dull red heat.

THE PREVENTION OF THIRST AFTER ABDOMINAL OPERATIONS.

Dr. W. M. Taylor has a short paper on this subject in in the *Memphis Medical Monthly* forFebruary, 1897. It is so brief and yet so timely that we give it in full. He says: "As is well known, it has been the practice with surgeons after abdominal operations to withhold water by the mouth for twenty-four hours, or until the patient is free from nausea and vomiting. During this time the thirst is distressing, and torture from that source has been so great in some instances that patients have been known to get up out of bed, in a momentary absence of the nurse, in search of water.

Some surgeons have for several years administered water by the rectum in small quantities to allay thirst; but the routine method of injecting a large quantity of saline solution (0.6 per cent.) for the prevention of thirst after abdominal operations was first resorted to in the Johns-Hopkins' Hospital. The procedure consists in the injection of a quart of normal saline solution into the lower bowel immediately at the close of the operation and while the patient is still under the influence of the anesthetic. The patient is elevated to the moderately high Trendelenburg posture, a stiff rectal tube is inserted well up into the sigmoid flexure, and the fluid slowly poured into a glass funnel, which is held three or four feet above the level of the patient's buttocks.

"A paper by Dr. Clarke (*American Journal of Obstetrics*, Aug., 1896) states that he has reviewed the special charts of one hundred abdominal section cases which have not, and one hundred cases which have, had the saline enemata, and that he is able to report the most gratifying results, not only in the alleviation of thirst, but also in the reduction to a minimum of vesical irritability, which is so common in operative cases.

"In six abdominal operations done for ovarian cysts, ovarian abscess, pyosalpinx and cystic ovaries, in four the saline enemata were administered as has been described. All of these operations were performed at two o'clock in the afternoon. Two of the patients did not call for water at all until the next morning; the other two asked for water once or twice during the night, but on its being denied they became quiet, and did not beg for it. The two cases in which the saline injection was not used suffered from the usual thirst, and were quite restless during the first night. The four patients who had the saline injection excreted a larger amount of urine during the first few days than the patients who did not have the injection; none of them suffered from vesical irritability, nor did the catheter have to be used to

empty the bladder. While all the six cases mentioned made good recoveries, those in which the saline injection was used had a quieter and smoother convalescence."—*Medicine.*

FATAL HEMORRHAGE FROM THE REMOVAL OF ADENOID VEGETATIONS.

Schmiegelow (*Monatsschrit für Ohrenheilkunde*, 1897, No. 3; *Centralblatt für Chirurgie*, August 14, 1897) reports a case, not his own, but occurring in the practice of a surgeon who had often done the operation without mishap. The patient was a boy, twelve years old, who showed nothing strikingly abnormal beyond a pronounced adenoid habitus and scrofulous glands in the neck. The operation was done without anæsthesia, and the ordinary Gottstein annular knife was used. Without any warning a sudden gush of arterial blood issued from the mouth and nose. In spite of prompt tamponing and subcutaneous and intravenous saline injections, death occurred in a few minutes. The internal carotid artery was found to have been opened just in front of its point of entrance into the carotid canal of the pars petrosa ossis temporis. The author supposes that swollen glands had pushed the vessel forward so that the pressure of the knife caused its rupture, for it was not cut.—*New York Medical Journal.*

CATHETERISM OF THE URETERS WITH THE HELP OF THE URETER CYSTOSCOPE. REPORT OF SEVEN CASES.

Willy Meyer, M.D., read before the New York Academy of Medicine (Section on Genito-urinary Surgery) a paper, saying:

"In reference to the manipulation I consider that to approach the ureteral mouth and to engage the tip of the tiny catheter in the same is not more difficult in the male than in the female. In order to be successful in the use of Casper's instruments, one will do well to be guided by the following rules, the observance of which has yielded me invariable success:

"1. Wash and cocainize the bladder according to well-known rules.

"2. Fill the bladder with from five to seven ounces of clear fluid.

"3. Introduce the instrument. For this purpose the ureter catheter should be pushed down to the internal opening of the canal of the cystoscope; the lid of the latter should be pulled out about one-third inch.

"4. As soon as the beak has entered the bladder the catheter should be gently pushed forward into the vesical cavity by about one-half to three quarter inch, and then the lid

should be at once pushed into place, i. e., it should be fully closed.

"5. After the interior of the bladder has been satisfactorily inspected and the ureteral openings have come into view, approach one of them.

"6. Let the ureteral opening appear at the very end of the cystoscopic picture farthest from the middle of the bladder, but keep it under your direct inspection, with the prism as near to it as possible.

'7. Push the catheter gently forward; if the beak's direction is a proper one, i. e., if it is parallel with that of the lower end of the ureter, the ureteral catheter will almost invariably easily enter the mouth, when conducted by a trained hand.

"8. Allow the catheter to proceed not more than one to two inches into the ureter, and withdraw the wire mandrel. Then, as a rule, urine will begin to flow, drop by drop, at intervals or continuously."—*Medical Review of Reviews*, October, 97.

GYNÆCOLOGY.

IN CHARGE OF

A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. England.

Fellow of the American Gynæcological Society, and of the London Obstetrical Society; Gynæcologist to the Montreal Dispensary; and to the Western Hospital; Surgeon-in-Chief of the Samaritan Hospital for Women; Professor of Clinical Gynæcology in Bishop's University, Montreal.

The Annals of Gynæcology for January, 1898, has several interesting articles. The first on Asepsis and Antisepsis by Dr. Sherwood Dunn, after pointing out the tremendous saving of life after injuries and wounds, in many cases reducing the mortality from 55 to 4 per cent., calls attention to the necessity for the most rigorous carrying out of all details. He says that the time required for an operation can be greatly reduced if the operator has sufficient assistants, but that the lack of appreciating the importance of keeping their hands aseptic, once they have been sterilized, induces many operators to do with as few assistants as possible. He advocates the use of ether to remove grease before sterilizing the hands, which latter he thinks are the greatest source of danger. For sterilizing gauze, ligatures, etc., he shows that fractional sterilizing is the safest. It consists in raising the temperature in a common steam sterilizer to 200° F. for 20 minutes on three separate occasions at intervals of one day. Pasteur has shown that this will destroy all germ life. He mentions Cushing's method for sterilizing cat-gut, which is worth noting. The coils of cat-gut are kept in stock, submerged in ether, which remove the grease. When required for use,

the coils of cat-gut are rinsed in fresh ether, wiped, unbound, stretched, and cut in suitable lengths. Each ligature is then placed in a separate glass tube, and thoroughly dried at a very gentle heat. The tubes with a corresponding number of suitable corks are then baked in a sterilizer, with proper regulating apparatus at a temperature of 140 C. for one hour, and the apparatus is allowed to cool slowly without opening it. The next day when any space present may be supposed to have developed, the oven is heated again, and its contents baked for one hour at 140 C. Meanwhile a solution of nine parts absolute alcohol and one part glycerine is prepared and boiled, and when the oven is opened, under due precautions, sufficient of this solution is put in each tube to cover the cat-gut, the cork is firmly inserted into the tube, and thus it is kept until the very moment of use in operation, when a nurse removes the cork and holds the tube ready for the operator to remove the cat-gut with clean forceps.

The importance of keeping the intestines aseptic is forcibly pointed out. Dominici, of Paris, after administering half an ounce of sulphate of soda and sulphate of magnesia mixed, the patient passed 400 billions of microbes in 24 hours.

During the following 24 hours the patient passed only half a billion or one eight hundredth as many, although the stools measured more than one fourth of the previous day's quantity. We know now that the *bacillus coli* is a prominent factor in appendicitis and even peritonitis, hence the advantage of treating the early stage of these diseases by saline purgatives.

Some Results of the Postural Method of Draining the Peritoneal Cavity after Abdominal Sections, by W. L. Burrage, Boston. This is quite a remarkable paper based on a report of Dr. Clark, Dr. Kelly's assistant, at Johns Hopkins' Hospital, on seventeen hundred cases of abdominal section from the standpoint of intra-peritoneal drainage.

Dr. Kelly, like most operators, has gradually abandoned drainage tubes after abdominal sections, and in their place he makes use of the absorbing process of the diaphragm to carry away the exudations from raw surfaces. The foot of the bed is raised from 12 to 18 inches, thus allowing peritoneal fluids to gravitate towards the diaphragm. Many cases are cited to prove the efficacy of the method. I have long been accustomed to raise the foot of the bed in bad cases of coeliotomy, but it was rather for the sake of letting the blood flow to the head to avoid fainting and to keep the heart full.

Dr. Burrage points out that the natural flow of fluids is towards the diaphragm ; he does not mention, but it is quite

possible, that the diaphragm acts as a pump to keep the peritoneal fluids moving. He notes what I have several times reported, that post operative stasis and general aching or soreness is much less since we introduced two or three quarts of normal salt solution into the peritoneal cavity or into the rectum. He claims that keeping the foot of the bed elevated for three or four days after abdominal operations does away with pain in the back. .

The Diagnosis of Tumors of the Breast is the title of an able article by the editor, Dr. Cushing. The most important deduction is that all tumors of the breast should be removed as early as possible, as even benign ones are liable to become malignant, after which the prognosis becomes much less favorable. My own experience emphasizes this still more strongly. When cancer of the breast is advanced enough to affect the glands in the axilla, it is too late to do much for the patient. I have had a number of such cases, and although I removed all the glands and cellular tissue in the axilla, leaving the vessels clean, and although I removed the pectoralis major and minor muscles, all the patients died within two years, while those whose glands were not affected, and from whom I removed the breast only, are all alive.

Hysterectomy for Fibrom-yoma; some Early Records, by Mary A. Dixon Jones, M.D. This is a most elaborate article, describing the first operations in America, which were performed by this lady operator of Brooklyn, and also the first operations performed in England by Dr. Clay, of Manchester. The writer is a strong advocate of total removal of the uterus. including the cervix. According to statistics of 42 operators in America the death rate of hysterectomy with the stump drawn out of lower angle of wound was 13½ per cent.; while that of total removal, including the cervix, the mortality was 12½. There was therefore only a slight difference. Certainly the convalescence is less when no stump is left. My own preference in the treatment of fibroid uterus is, 1st, if the patient can afford the time and expense, I would treat them with electricity, which cures the majority of them without any mortality; 2nd, if electricity could not be employed, then I would prefer to remove the tubes and ovaries close to the uterus. This almost invariably puts an end to the hæmorrhage, and causes retraction of the tumor, so that it never troubles the patient, and has a mortality of not more than 2 per cent.; 3rd, if the patient desires immediate and entire removal of the tumor, I am in favor of total removal, as advocated by Dr. Mary Dixon Jones.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 7, 1898.

ROBERT CRAIK, M.D., President, in the Chair.

Dr. E. W. Archibald was elected an ordinary member.

THE TREATMENT OF FRACTURES BY THE AMBULATORY METHOD.

Dr. G. E. ARMSTRONG showed a man whom he was treating for fracture of the tibia by the ambulatory method, and gave the following description of it:

The idea is to apply a fixation apparatus that will enable the patient to use the broken leg in progression. To allow the patient to get out of bed and to go about with the aid of crutches is the idea in the ambulatory treatment of fractures. To attain this object any fixation splint may be used, but plaster of Paris has been chiefly employed, either alone or together with other splints. I have tried to carry out the idea in eight or ten cases recently admitted to the wards of the Montreal General Hospital, and I find that in properly selected cases this method possesses decided advantages.

In this man, the fracture is of both bones about the middle of the leg, and the fracture of the tibia is very oblique. He limps along as you see, but that is about all the inconvenience he has. One great advantage is that the patient can get out of bed. The ability to move about is a great gain. A business man may go down to his office for an hour or two each day and look after his affairs. The advantage is still greater in the case of old people with fracture of the neck of the femur. By avoiding the confinement to bed, pneumonia is prevented. I find this method adapted to the treatment of Pott's fracture and fractures of the fibula.

The other advantages claimed for the ambulatory method are lessening of the muscular atrophy and the stiffening of joints, more rapid repair, and the avoidance of delirium tremens.

MENIERE'S DISEASE.

Dr. F. G. FINLEY exhibited a case of Menière's disease.

The patient, aged 44, baggageman, was admitted to the Montreal General Hospital on Dec. 29, 1897, complaining of attacks of vertigo with vomiting,

About four years ago, whilst apparently in perfect health, he began to have attacks of giddiness on rising in the morning, staggering always towards the left side. The attacks lasted from 45 to 60 minutes, and came on every two weeks, and latterly have become rather more frequent. About the same time he noticed noises in the ears, compared to rumbling or whistling, and these sounds have continued constantly since.

For the past year there has been diarrhœa, a loose stool being passed after each meal, but not accompanied by pain. Vomiting with the attacks of vertigo set in two months ago.

For the past six months deafness has been noticed.

On the day before admission, whilst at work, he suddenly

fell down and lost consciousness for half an hour, hurting his shoulder, but not biting his tongue or passing urine.

His health previous to the onset of the attacks of vertigo was always good, with the exception of an attack of pleurisy 18 years ago. A brother is stated to have died of this disease, but there is nothing further pointing to tuberculosis in the family history.

Examination.— The patient is a rather spare man, with small muscles. The temperature is normal (and continued so during his stay in hospital) and the pulse 76.

The right lung presented marked dullness at the apex posteriorly to the 5th spine, with slight blowing breathing, and fine crackling *râles*. There was no cough or expectoration, nor had there ever been. The other organs and urine were normal. The bowels moved once or twice daily after his admission, the stools being rather loose.

The ears were examined by Dr. Birkett, who reported R ear 1-40, L. ear c-40, membranæ tympanorum, indurated and thickened, no reflex. Bone conduction very defective, especially for the higher notes.

During his stay in hospital he was treated with pilocarpin hypodermically with a view of influencing the chronic catarrhal condition in the ears. Although there were no attacks of vertigo in the hospital, this is rather to be attributed to rest and quiet than to treatment, as the attacks recurred as frequently as ever after his exit.

The case is evidently a typical one of Menière's disease, the four cardinal syptoms—vertigo with vomiting, noises in the ears, and defective bone conduction—being present.

The chronic catarrhal otitis media points to a similar condition of the labyrinths.

The importance of examining the bone conduction with tuning forks of different pitch is very well exemplified in this case. With a low pitched note, no departure from the normal could be made out, but with a high note the difference was very obvious.

The diagnosis of aural vertigo is usually easy, although the condition is frequently overlooked and attributed to biliousness. According to Gower 90 per cent. of cases of vertigo are due to labyrinthial disease, and the importance of "*Vertigo e Stomaco Læso*," doubtless owing to the teaching of Trousseau, has been much over-estimated. Gastric disturbance undoubtedly increases the frequency and often precipitates an attack, but inquiry into the aural symptoms, and particularly careful testing of bone conduction, almost always shows that the origin of the disease is in the ear.

The chronic diarrhœa, with evidence of disease in the apex of the lung, was attributed to tuberculosis.

Stated Meeting, January 21, 1898.

ROBERT CRAIK, M.D., President, in the Chair.

IRRITATIVE TRISMUS.

DR. J. ALEX. HUTCHISON read the report of this case, and presented the patient before the Society.

APPENDICITIS IN AN INFANT.

DR. J. ALEX. HUTCHISON read the report of this case.

Stated Meeting, February 4, 1898.

ROBERT CRAIK, M.D., President, in the Chair.

OSTEOMYELITIS OF THE TIBIÆ AND FEMUR.

DR. BELL presented two tibiæ and the lower half of a femur, illustrating the late effects of osteomyelitis, and gave brief reports of the case as follows :

CASE I.—A. W., a strongly built man, æt. 44, was attacked with acute osteomyelitis in the lower third of the left tibia at the age of 12 years. He recovered after a long severe illness, with a sinus persisting. Several years later another sinus appeared higher up the leg. These sinuses kept healing over and breaking out at intervals, and on one occasion a sequestrum about three inches long escaped from the uppermost sinus. Eight years ago the bone was operated upon. He was laid up for eight or nine months, and it was a year and a half before he could go about as usual,—the sinus still persisting. Four years ago he fell and broke the bone about the middle. He was laid up four or five months, and the bone united, but the sinus still persisted. Three years ago he broke the bone again at a point a little higher up than the first fracture. He was laid up four or five months, and union took place. He was able to get about and work on his farm until the 30th of December, 1897, when he fell and broke the bone again on a still higher level than the previous fracture. Two days later he came to the Royal Victoria Hospital. There was a clean transverse fracture across the tibia, at the junction of the upper and middle third, but no displacement. The anterior subcutaneous portion of the tibia in the middle third was exposed. It was free from periostum, rough and irregular. A sinus led down to the bone from a point about three inches below the tuberosity of the tibia, on the inner and posterior surface, and another about eight inches lower down. On the 6th of January, 1898, the leg was amputated through the knee joint (lateral flaps), and the patient made an uninterrupted recovery, with an excellent stump.

The tibia was dissected out and sawn down the centre throughout its whole length. The bone was greatly sclerosed, the medullary cavity obstructed, and it showed three or four old abscess cavities in the cancellous tissue.

CASE II.—W. B. McG., a pale, neurasthenic man, æt. 48, was seized suddenly one evening, after a hard day's skating, when 14 years of age (1863) with acute osteomyelitis in the upper part of the left tibia. He was very ill for several months, and recovered with a sinus. The usual history of sinuses—healing over and breaking out again—followed, but he was laid up with acute suppurative conditions about the leg in 1870, 1881, 1885, and November, 1886. Since the last attack he has suffered a great deal of pain in the tibia, and has not been able to get about without a crutch, and he had an attack of synovitis of the knee joint, which, however, left thee joint functions unimpaired. On January 1st, 1897, there was general thickening of the bone with tender spots, just below the tuberosity on the inner side and about the middle third and the upper part of the lower third. There were no sinuses. Trephining was recommended, but the patient declined to have any operation

except amputation. This was done, through the condyles, on the 21st of January, and the patient made an excellent recovery.

Vertical section of the bone showed numerous abscess cavities throughout its whole length. The medullary cavity was obliterated and the whole bone very dense. It would have been quite impossible to have located and enumerated the many abscess cavities found.

CASE III.—A pale, emaciated boy, æt. 19, was seized with osteomyelitis in the lower portion of the femur in August, 1894. A long illness of many months followed, during which the leg became flexed to an angle of 45°. Sinuses persisted, and operations for the removal of sequestra were performed in September, 1896, September, 1897, and January 13, 1898. At this latter operation it was decided to recommend amputation. On the 28th of January, 1898, a circular amputation was performed at the junction of the middle and upper portions of the thigh. The patient made an excellent recovery.

Section of the bone (in its length) showed obliteration of the medullary cavity, sclerosis and deep irregular cavities in the lower end of the bone, from which sequestra had been removed.

In presenting these cases Dr. Bell expressed the opinion that surgeons, in their laudable desire to save limbs, probably often erred in doing repeated, serious operations upon hopelessly diseased bones instead of amputating. He thought every one would admit that these cases were hopelessly diseased, and that the patients who recovered in three or four weeks, and would be getting about on modern artificial limbs in three or four months, would appreciate the more radical treatment.

Dr. G. E. ARMSTRONG, said :

Hospital surgeons are more frequently called upon to treat the sequelæ of osteomyelitis than the disease itself. With the exception of the acute cases arising during the convalescence of typhoid patients transferred from the medical wards, hospital surgeons rarely see these cases during the early stages. This is unfortunate and hard to account for. The pathology and bacteriology of osteomyelitis are now well understood. The diagnosis and treatment during the early course of the disease are not difficult, but the closure of the large bone cavities found in old cases of long standing is extremely unsatisfactory. I have seldom been able to close these cavities with blood clot as advised by Schede. Nor does Senn's method of closing them with decalcified bone chips yield much better results. I believe that these extreme cases, necessitating amputation, would not occur if osteomyelitis was recognized early and treated properly in the earty stages. I have tried twice unsuccessfully to close the cavities by filling them with sterilized plaster of Paris. The insuperable difficulty is to render these large irregularly shaped spaces sterile.

Dr. BELL, in reply, said that he agreed with Dr. Armstrong about the way in which cases were overlooked when acute, though this was not so much the case now as it was many years ago, when the cases of which the report had been given were in the acute stage. One of these occurred 35 and another 32 years ago. With reference to the closing of large cavities, he had used both chips

and blood clot with not very great success. Healing by blood clot he considered the ideal method. Irregular cavities could not be rendered aseptic.

Vaginal Hysterectomy upon an old Woman.

Dr. F. A. Lockhart read the following report:

The patient, from whom the accompanying specimen was removed, is a Mrs. F., aged 75 years. She was first admitted to the gynæcological ward of the General Hospital on November 5, 1896. Her complaint was "falling of the womb," which she said had only existed for eight days, but this is probably incorrect, as her statements are very unreliable, and the ulcerated condition of the vaginal mucous membrane pointed to a duration of at least several weeks. She first menstruated at 14, and was regular every month until she was 21 years old, when the flow ceased and did not return. She had pain in the right iliac region for seven or eight days each month at the time when the flow should have appeared.

She had one full-time child, who, she says, is 33 years old, but I think that either this statement or the previous one that her menses finally disappeared when shew as twenty-one years of age is wrong, as she would be very unlikely to have a child after the cessation of menstruation, whereas an extremely probable cause of that cessation would be superinvolution of the uterus.

The patient's general condition was fairly good, but all of the superficial arteries were very atheromatous, which made one rather anxious to avoid operation.

Local examination of the genitals revealed a large mass consisting of the uterus, part of the bladder and rectum, and the vagina, protruding from the vulva, the cavity of the vagina being reduced to about half an inch in depth.

The mucous membrane was eroded all round the protruding mass for fully two inches from the external os uteri, and was also greatly hypertrophied and thickened. There was no enlargement of the inguinal glands.

The uterus was carefully washed with creolin, and, after dusting it with a powder consisting of oxides of bismuth and zinc and boracic acid, was easily returned inside of the vulva, and a large boroglycerine tampon inserted to retain it in position. The above proceeding was repeated daily for the next ten days, the patient being kept in bed, after which the vagina was simply douched with creolin twice daily until the patient left the ward on Nov. 29, by which time the uterus had returned to its normal condition and the ulceration had healed except at the margin of the os uteri.

The patient re-entered hospital on Dec. 11th, the uterus having remained in position for ten days only after her leaving the ward. Four days later the uterus and appendages were removed, *per vaginam*, ligatures being used. The only points about the operation worthy of note was the extreme difficulty at first on account of the thickened mucous membrane obscuring the usual landmarks' and the presence of a unilocular cyst of the right ovary, the size of a large orange. (This occupied the site of the periodic pain from which the patient suffered.) After the uterus had been completely

separated on the left side, the cyst bulged into the wound, and was punctured and removed without much difficulty.

On account of the atheromatous condition of the vessels, chloroform was used instead of ether.

The patient's convalescence was uneventful, the pulse only twice going up to 90 and the temperature never reaching 100° F. She sat up in a chair on the 18th day, and left the hospital on the 30th.

The pathologist reported the presence of very early cancer of the cervix.

I am greatly indebted to the care and watchfulness of Dr. Chas, Gurd, who was house gynæcologist at the time, and to the nurses. as without their active co-operation the result might have been different.

Dr. Lapthorn Smith thought removal of the uterus was the proper procedure in cases of procidentia such as this, because the cervix was most often the seat of beginning cancer. It was so in three of his cases. When the patient would not consent to this, ventro-fixation was satisfactory, if the uterus was not too large. Where the uterus was large and heavy, Alexander's operation was preferable, because there was too much pulling on the abdominal wall after ventro-fixation. In either case the cervix should be amputated, and an operation performed for narrowing the anterior and posterior vaginal wall.

With regard to whether one should use ligatures or clamps in vaginal hysterectomy, he thought the ligatures gave the best results, although they rendered the operation much longer and more anxious. In one case he had sewed the two broad ligaments together and closed up the opening in the vaginal roof with cat-gut, and thus greatly strengthened the floor of the pelvis. This patient went to work as a charwoman a week later against his orders.

Dr. J. C. Webster asked if Dr. Lockhart had performed the operation for cancer or for the rellef of the procidentia. On the operator replying that it was for suspected cancer, Dr. Webster pointed out that it was important to make the distinction, as this operation had been repeatedly tried for procidentia uteri and had been justly condemned by such men as Pozzi, Leopold, and Muller among others. The reason for this was a very simple one. Procidentia uteri was simply a hernia of the pelvic floor, and removal of the uterus not only did no good, but actually did harm by taking away part of the support. He had never seen a case that could not be helped by amputation of the cervix, anterior and posterior colporrhaphy, perineal repair, and, in addition, in many cases, ventrofixation of the uterus.

Total extirpation could only be regarded as justifiable when the removal of some condition associated with the procidentia was necessary, *e. g.*, carcinoma or myoma uteri.

THE

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Editorial.

SAJOUS ANNUAL AND ANALYTICAL ENCYCLOPÆDIA OF PRACTICAL MEDICINE.

This is the title of a new work to be shortly issued by the F. A. Davis Co., and which replaces the *Annual* of the *Universal Medical Sciences*, which with the 1896 issue ceased to exist. While a very useful *resumé* for a few, it has proved to be too elaborate a work to be popular with the profession at large; hence, an attempt to better meet the requirements of the largest number, and to produce an annual *resumé* of progress in a condensed and attractive form.

The modified work will consist of a number of volumes, in which all the general diseases, medical, surgical, obstetrics, etc., will be fully described, and in the text will be inserted all progress made for ten years back. Large type is used for the general text and small type for the excerpts.

A new annual entitled *The Monthly Encyclopædia of Practical Medicine*, which is a continuation of the *Universal Medical Journal*, will give the progress in current literature, making at the end of the year a volume of 500 pages. The whole work will be revised several times a year, but one will be able to keep abreast with the *Monthly* for at least three years without purchasing a new edition, during which time

the *Monthly* is sent without extra charge. We hope this new effort will meet with success, and that the novel method proposed of keeping the profession fully posted will prove an advanced step.

THE PHILADELPHIA MEDICAL JOURNAL.

We gave a preliminary notice of the appearance of this new weekly a couple of months before its first issue, on January 1st, 1898. The Company is composed entirely of medical men, all of whom stand in the leading rank of the practitioners of America.

Dr. George M. Gould is editor, and his best efforts are being put into the management of this journal, and it doubtless will, like all Dr. Gould's literary and scientific work, prove a complete success. There are some thirty-six pages of reading matter in each number. The subscription price is three dollars It is hoped that this will enlist a larger number of subscribers, and in that way make up for the larger amounts that are received by journals of similar standing.

The arrangement and scope of the journal is on a modified plan. There is first some half a dozen pages of editorial comment, in which the live subjects of the day are ably discussed. Under American News and Notes is included a *resumé* of the happenings and interesting notes upon occurrences throughout the United States. Then foreign news and notes represent the happenings abroad, while Philadelphia News and Notes refer to all matters of medical interest in this great centre.

A novel and useful feature is the giving of the title of the original articles in a number of leading medical journals of the world with a *resumé* of the article. There are six or seven original articles in each number, and so far the editor has succeeded in securing papers from the leading medical writers of the United States and Canada.

If the same freshness and scientific vitality continues to characterize this new medical journal, which is worthy of an extended patronage, we bespeak for it an unexampled career.

THE AMERICAN MEDICAL ASSOCIATION.

DENVER MEETING, JUNE 7TH, 1898.

COMMITTEE OF ARRANGEMENTS.

306 McPHEE BUILDING,
DENVER, COL., MARCH 15, 1898.

DR. J. M. BEAUSOLEIL,

President Canadian Medical Association, Quebec :

MY DEAR SIR :—I am requested by the local Committee of Arrangements for the coming meeting of the American Medical Association, which will be held in Denver on June 7th to 10th next, to extend to you and the members of the Canadian Medical Association a cordial invitation to attend this meeting. Great interest is being taken throughout the United States, and this promises to be one of the most successful meetings of the American Medical Association which has ever been held. Special trains are being arranged from many of the eastern cities to bring the delegates to Denver at that time, and the railways are heartily taking up the matter and promising enthusiastic co-operation to make the occasion an unqualified success. The opportunity will be an unusual one for those desirous of seeing the great health resorts of Colorado and the Rocky Mountains under favorable circumstances, and at very much reduced cost. Delegates from Canada may feel assured that the members of the profession in Denver and Colorado will heartily welcome them to this meeting, and will do all in their power to make their excursion an enjoyable one. Visitors from Medical Societies outside of the United States are invited to register without fee, and to exercise all the privileges of membership, except, of course, that of voting.

We hope that the Canadian Medical Association will be represented by a very large delegation.

Will you please see that some notice of this invitation is sent to the members of the Association throughout the Dominion, so that they may feel assured of a hearty welcome it they come, and are properly introduced by your Society.

I remain, dear sir, yours very truly,

(Signed) EDMUND J. A. ROGERS (McGILL),
Chairman Committee on Foreign Invitations.

THE ETHICS AND POLITICS OF MEDICAL BOOK-REVIEWS.

The following editorial on this subject from the *Philadelphia Medical Journal* sheds light on some dark places, and is exceedingly suggestive as to where reform is required :—

We have talked with many editors concerning book-reviewing, and for years have attentively studied the methods and motives at work. As a result we have no hesitancy in saying that by far the greater part of the reviews in our 275 medical journals are not only incompetently done, but that they are worthless scientifically, ethically, and as literature. This everybody knows well enough, and it is admitted by editor, author, publisher, reviewer, and profession. The whole business needs revolutionizing or abolishing. The review department of journals whose editors have any trace of journalistic or professional conscientiousness is the terror and the disgust of these editors. It is the football of commercial interests, dominated by prejudice or by personal motives, either of the editor, as regards his publisher, or as regards his author; or, on the other hand, of a hundred possible jealousies and concealed motives of the reviewer, as regards the author. When secret malevolence does not rule, over all is the paralyzing hypnosis of the desire to say pleasant things, to avoid arousing enmities, and not to hurt the feelings of the author and publisher. The result is that the whole affair, from one motive or another, is deeply dyed with dishonesty, superficiality, flattery or malignancy,—but all thoroughly misleading.

That is the diagnosis. Pages might be devoted to the symptomatology:—Editors, *e.g.*, refusing to review books of their rivals, or doing so maliciously; publishers dictating good reviews of their own books, or "swapping" good reviews with certain rival publishers; publishers coercing the character of reviews in other journals than their own by a dozen contemptible means, or refusing to send any of their books at all to the non-complaisant; medical journals indiscriminately reprinting the publishers' circulars and praising every book with stereotyped phrases—for the sake of the private library-shelves; authors anonymously reviewing their own books; lenient editors, to avoid trouble, bunching twenty so-called reviews on a page, etc., etc., with infinite variations, *ad nauseam*.

We cannot go now into the treatment, but wish only to speak of one complication of the disease that needs a bit of clearing up. Reviewers may be divided into three classes :

the anonymous (or editorial), the initialed (or hermaphroditic), and the entirely-signed (or purely individual). The last class may be passed over, because when a reviewer signs his whole name his opinions carry weight only according to his personal ability, and are recognised by all as simply one man's opinion. The neuter-gender review by initials is "neither flesh nor fowl nor good red herring." Neither the journal nor the individual is held responsible.

All reviews, like all editorials that have any respect shown them, or that have carrying-power, are anonymous, and for these the Journal must assume direct and absolute editorial responsibility. Any other course results in ludicrous and silly ineptitude and self-contradiction. If the periodical does not assume this responsibility, there is no right to use the editorial "we," and no right, human, or professional, or commercial, to review the book at all. The spectacle of an editor, for example, in one column, reviewing eulogistically a book that denounces on every page the germ-theory of disease, and maligning the motives of those who believe in the germ-theory, while, on another page of the journal, editorially upholding the doctrine—all this is illuminating—of many things.

We are thorough believers in the wisdom of the anonymity of editorials and reviews in medical journalism, and the strict holding of the journal to an accountability for every editorial utterance. It would seem that this position would hardly need defence. All high journalism has come to this practice, and it is the only condition of ethical and journalistic progress. There is something in the editorial "we" that cannot be gained by any ego-ism or individualism, however expert and able. Nos becomes *νοῦς* by putting "you" into it. A good journal must have a character of its own that is different from that of any other journal, and from that of any one or more of its editorial staff. It is, in a word, if at all true to any ideal standards, an organ, the spokesman of many and of all, and must, consciously or unconsciously, trend to non-individualism, to action in the interests and aims of the many. It is this very impersonalism that gives its opinion weight and unselfishness; an editorial writer must merge his individuality, his personal peculiarities, into the larger general purposes, look for the light and truth that is beneath individual imperfections, struggling to larger issues and for the common good. Anonymity in men, if not in puppets, quenches whims, foibles, and crankeries, and leads to attention riveted upon the wants of and duties to the thousands of readers. Let every subscriber hold the composite editorial personality strictly responsible for what is

said in all unsigned articles. In this way, the careless and *laissez-faire* editor can be brought up standing before the bar of professional responsibility. One result of such an accounting would be an ending of the thousand disgraces of medical-book reviewing, which at present make our journalism the butt of ridicule of every conscientious and wide-awake reader.

THE AMERICAN MEDICAL ASSOCIATION.

Section on Materia Medica and Therapeutics.

The following papers and discussions have been promised for the meeting at Denver, Col., June 7-10, 1898 :—

"Yellow Fever : Its Etiology and Treatment." Discussion by Surgeon-General George M. Sternberg, M.D., of Washington, D.C. ; Prof. John Guitéras, M.D., of Philadelphia ; Sollace Mitchell, M.D., of Jacksonville, Fla.; T. S. Scales, M.D.; of Mobile, Ala.; G. B. Thornton, M.D., of Memphis, Tenn.; H. M. Bracken, M.D., of Minneapolis, Minn. ; P. E. Archinard, M.D., of New Orleans, La.; Prof. William H. Welch, M.D., of Baltimore, Md. ; Captain R. S. Woodson, M.D., Assistant Surgeon United States Army, of Fort McPherson, Ga. ; Prof. William Pepper, M.D., LL.D., of Philadelphia, Pa.

"Aims of Modern Treatment of Tuberculosis." By Prof. Edwin Klebs, M.D., of Chicago. Discussion by Charles Denison, M.D., of Denver, Col. ; Prof. William Pepper, M.D., LL.D., of Philadelphia, Pa.; Prof. William H. Welch, of Baltimore, Md. ; Prof. William E. Hughes, M.D., of Philadelphia, Pa.

"Serum-therapy of Tuberculosis." By Prof. S. O. L. Potter, M.D., of San Francisco, Cal. Discussion by Prof. James M. Anders, M.D., of Philadelphia, Pa. ; C. C. Fischer, M.D., of St. Louis, Mo.

"The Therapeutics of Pulmonary Phthisis." By Paul Paquin, M.D., of St. Louis, Mo.

"The Practical Value of Artificial Serum in Medical Cases." By P. C. Remondino, M.D., of San Diego, Cal.

"The Present Status of Serum-therapy." By George W. Cox, M.D., of Chicago, Ill.

"Biological Activity of the Antitoxins." By Prof. Joseph McFarland, M.D., of Philadelphia, Pa.

"Glandular Extracts." By Prof. Isaac Ott, M.D., of Easton, Pa.

"The Use of Remedies in Diseases of the Heart and Blood-vessels." By T. Lauder Brunton, M.D., D.Sc., F.R.S., of London.

"The Mescal Button." By Prof. D. W. Prentiss, M.D., of Washington, D. C., and F. P. Morgan, M.D.

"The Modern Intestinal Antiseptics and Astringents." By William Frankhauser, M.D., of New York. Discussion by Boardman Reed, M.D., of Philadelphia, Pa.

"A New Non-amylaceous Flour for Diabetics and Dyspeptics." By N. S. Davis, jun., A. M., M.D., LL.D., of Chicago, Ill.

"The Solution of Ethyl Nitrite." By D. J. Leech, M.D., of Manchester, Eng.

"A Contribution to the Effects of Coffee in Excess." By Prof. William Pepper, M.D., LL.D., of Philadelphia, Pa.

"The Treatment of Insomnia." By Robert T. Edes, M.D., of Jamaica Plain, Mass.

"Are there Therapeutic Principles?" By Solomon Solis-Cohen, M.D., of Philadelphia, Pa.

"To What Extent is Typhoid Fever favorably modified in Its Course, Duration, Termination or Sequelæ by the Administration of Drugs." By Frank Woodbury, M.D., of Philadelphia, Pa.

"Strychnine." By J. N. Upshur, M.D., of Richmond, Va. Discussion by Prof. J. H. Musser, M.D., of Philadelphia, Pa.; Walter M. Pyle, A.M., M.D., of Philadelphia, Pa.

"Methods of Teaching Materia Medica and Therapeutics." By Prof. G. H. Rohé, M.D., of Baltimore, Md.

"The Study of Materia Medica and Therapeutics." By H. M. Bracken, M.D., of Minneapolis, Minn.

"A Contribution to the Pharmacology of Cannabis Indica." By C. R. Marshall, M.A., M.B., Pharmacological Laboratory, Downing College, Cambridge, England.

"The Place of Hydrochloric Acid in the Treatment of Diseases of the Stomach." By Boardman Reed, M. D., of Philadelphia, Pa.

"The Continuous Use of Digitaline in the Vasomotor and Cardiac Lesions of Senility." By Henry Beates, jun., M. D., of Philadelphia, Pa.

"Home Remedies *versus* Patent Medicines." By Prof. Adolph Koenig, M. D., of Pittsburg, Pa.

"Opium in Bacterial Diseases." By J. P. Farnesworth, M. D., of Clinton, Ia.

"The Great Therapeutic Importance of a Rational Adaptation of Cathartic Remedies to the Physiological Functions of the Gastro-intestinal System." By E. D. McDaniels, M. D., L L. D., of Mobile, Ala. Discussion by Prof. John M. Dunham, A. M., M. D., of Columbus, O.

"Recognition of Temperament: a Factor to the Selection of Remedies, and their Dosage in Disease." By J. E. Moses, M. D., of Kanas City, Mo.

"On Some Preparations of the National Formulary." By C. Lewis Diehl, Ph. G., of Louisville, Ky.

"The Use of Stimulants in Acute Diseases." By E. B. Hershey, M. D., of Denver, Col.

"Codeina." By A. K. Minich, M. D., of Philadelphia, Pa.

"Therapeutics of Idiopathic Epilepsy." By Prof. J. N. Barnhill, A. M., M. D., of Columbus, O.

"The Use of Drugs in Diseases of the Uterus." By Prof. John M. Dunham, A. M., M. D., of Columbus, O.

"Why the Pharmacopœial Preparations should be Prescribed and Used by the Profession." By Leon L. Solomon, M. D., of Louisville, Ky.

"The Use of Electricity by the Practitioner." By Caleb Brown, M. D., of Sac City, Ia.

"The Relation of Pharmacal Legislation to Pharmacal Education." By Willis G. Gregory, Ph. G., of Buffalo, N. Y.

"The Uric-Acid Diothesis: Its Cause and Maladies Resulting from it. Is it a Cause or an Effect of Bright's Disease of the Kidneys?" By H. V. Sweringen, M. D., of Fort Wayne, Ind.

"The Sulphocarbolates." By Prof. William F. Waugh, M. D., of Chicago, Ill.

"Incompatibles." By B. E. A., Ruddiman, Ph. M., M. D., of Nashville, Tenn,

"Fraudulent Claims—The Remedy." By C. C. Fite, M. D., of New York.

"The Selection of Diuretics and Lithon, triptics in Diseases of the Urinary Tract." By Ernest L. Stephens, M. D., of Fort Worth, Texas.

"Life-history of the BacilusTuberculosis in its Relation to the Treatment by Tuberculin." By Robert Reyburn, M. D., of Washington, D. C.

"The Chemistry of the Albuminates." By F. E. Stewart, M. D., of New York.

The following have also promised papers, subjects to be announced very soon, together with the day assigned for each discussion and paper:

Dr. R. S. Woodson, U. S. A., Fort McPherson, Ga. Dr. Dudley W. Buxton, London, England; Prof. I. E. Atkinson, of Baltimore, Md.; Prof. George F. Butler, M. D., of Chicago, Ill.; Prof. Joseph P. Remington, of Philadelphia, Pa.; Prof. Ernest B. Sangree, A. M., M. D., of Nashville, Tenn.; Dr. L. A. Sayre, of Lawrence, Kas.; Dr. T. M. Balliet, of Philadelphia, Pa.

The chairman will be pleased to receive and place upon the programme su jects for discussion and papers. John V. Shoemaker, M. D.. chairman, 1519, Walnut St., Philadelphia Pa.

PERSONAL.

Dr. Lapthorn Smith, who has arranged to spend the summer visiting the Gynæcological clinics of Europe, will leave Montreal on the 21st May, and will be absent until the 21st of August. He has promised to send the CANADA MEDICAL RECORD monthly letters from London, Paris and Berlin, which are sure to prove of interest to our readers.

PUBLISHERS DEPARTMENT.

APPLETONS' POPULAR SCIENCE MONTHLY FOR MARCH, 1898.

The opening article in *Appletons' Popular Science Monthly* for March describes A Summer Journey to the Sahara Desert; It is by Prof. Angelo Heilprin, of the Philadelphia Academy of Sciences, and is copiously illustrated. Franklin Smith, under the title An Apostate Democracy, sharply criticises the degeneration of American political ideals and statesmanship. Dr. Fred E. Leonard discusses, the important question of Physical Training in the Colleges; he points out the good results which have followed its general introduction, and gives a general survey of the methods in use at different institutions. The pioneer scientific society of the West, The Academy of Natural Science at St. Louis, is described by Prof. Frederick Starr, of the University of Chicago. In a World Half as Large is the title of an article by the late M. J. Delbœuf, discussing some of the inconsistencies of Laplace's *Exposition du Système du Monde.* The concluding chapter in Prof. William Z. Ripley's series on the Racial Geography of Europe takes up the problems of city populations. An interesting archæological paper, by F. S. Dellenbaugh, is entitled Fabric-Marked Pottery. The Taxation of Choses in Action is the title of David A. Wells's sixteenth chapter. Harold W. Fairbanks describes the curious geologic structure of the Great Sierra Nevada Fault Scarp; the text is accompanied by instructive illustrations. The first Thermometers, by M. P. Duhem, gives a history of this now universally used instrument, and describes some of the curious forms in which its principle was first applied to ascertaining temperature. The Sketch is of Sir Joseph Lister, the author of antiseptic surgery. The Claims of Science and the Upward Struggle of Society are the titles in the Editor's Table.

New York: D. Appleton and Company. Fifty cents a number; $5 a year.

PAIN IN OTITIS.

Dr. George H. Powers, Professor of Opthalmology and Otology in the University of California, San Francisco, in an article in *The Medical News*, writes as follows in reference to the treatment of pain in otitis: "At my first visit I found a copious discharge of bloody serum from the ear with hardly a trace of pus. He suffered from severe cephalalgia, but there was no special tenderness in or about the ear, and no swelling. Thorough cleansing of the meatus with dry cotton relieved the pain in the head remarkably, and with a dose of antikamnia, 10 grains, he slept some hours."

SANMETTO THE STANDARD PREPARATION FOR GENITO-URINARY DISEASES.

For some years I have been a very warm admirer of Sanmetto, and have found its action marked and well defined in the cases wherein I have have used it. In cases of prostatitis, with loss of virile power in elderly men, I find its action superb. In chronic specific urothritis, cystitis and all irritable conditions

of the urinary tract I find Sanmetto very efficacious. I do not hesitate to recommend it as a standard preparation in cases where the action of pure santal and saw-palmetto is indicated.

JOS. MARSHALL, M.D.

DURAND, MICH.

SANMETTO AN INVALUABLE ADDITION TO OUR MATERIA MEDICA.

It gives me pleasure to state that Sanmetto at my hands has proven all that its manufacturers claim for it. I consider it an invaluable addition to our materia medica.

SCHUYLER C. GRAVES, M.D.,

Dean, and Professor of the Principles of Surgery and Clinical Surgery, and Clinical Professor of Abdominal Surgery, in the Grand Rapids Medical College.

GRAND RAPIDS, MICH.

No one who is interested in the best contemporary French literature can afford to miss the series of sketches and stories by Paul Bourget, which will begin in *The Living Age* for April 2. These sketches have been but recently published in France, and this is their first appearance in English dress. They are translated for *The Living Age* by William Marchant. They are extremely clever and characteristic.

CANADA
MEDICAL RECORD

APRIL, 1898.

Original Communications.

STRONTIUM AND ITS SALTS.

By ALEXANDER B. BRIGGS, M.D.

That the profession have in strontium salts remedies of great therapeutic value is my firm belief, and my experience with them in practice during the past two years has very materially strengthened my faith in them. It has been a surprise to me in conversation with quite a number of my colleagues to find that they are so seldom prescribed. That they have been of such signal help to me in my professional work, and that so little has been said and written about them of late, is my only excuse for bringing the subject before you to-day.

There seems to be an impression that there is more or less danger in the use of the strontium salts from their toxic effects ; this is wholly an error, as has been proved by the researches of such men as Professor Germain See, Dr. Constantin Paul and Dujardin-Beaumetz, who found that, in every instance where conflicting reports and toxic effects have been reported from their use, they were due to the presence of barium, which is found in the commercial product. When I have prescribed these remedies I have always used the pure salts (Paraf-Javal) or their solution prepared by P. Chapoteaut of Paris. At present I think Strontium and its salts are unofficinal in the pharma copœia, but, nevertheless, the discovery of their therapeutical properties and the good

Read before the Washington Co. (R.I.) Medical Society, July 8, 1897.

results in therapeia that have followed their administration would warrant us in the belief that, as they become better known and more often prescribed, they will become more highly appreciated.

The salts that I have most frequently used are the bromide, iodide and lactate, and I will speak of them in the above order.

Bromide of strontium is a colorless, transparent salt, occuring in hexagonal crystals. It is somewhat deliquescent. The dose is from five grains to one drachm. It is not incompatible with the bromides of the alkalies, and it is soluble in both water and alcohol; it can be administered with all the alcoholic tinctures and most fluid extracts. Its indications for use are those of bromide of potassium, and, while it is a perfect substitute for the potash salt, its prolonged use even in large doses does not seem to produce the untoward results so often noticed in the use of the former salt. The gastric disturbances, the cutaneous eruptions so often noticed in the use of the potash salt, are not seen when the strontium salt is used; again, the depressing and systemic agitation from the prolonged use of the potash, which all have encountered in practice, I have never seen from the strontium bromide.

In cases of epilepsy and other spasmodic neuroses, where the potash salt has been given for a long time, the patient thereby becoming insusceptible to its action, the strontium salt may be substituted with safety and great advantage.

In many diseases of the stomach, the bromide salt will be found of especial benefit. In three obstinate cases of vomiting of pregnancy in which I have prescribed the drug during the past year, two received signal benefit, while in the third case it seemed to have no marked effect upon the vomiting, as the stomach would not retain the remedy; in this case it appeared to have some reflex effect upon the vomiting centre, when given in drachm doses per rectum every six hours, and it was so administered for several days in connection with other treatment.

In one case of hyperæsthesia of the stomach that accompanied and followed ulceration for several weeks after I was satisfied the ulcer had healed, the neuroses promptly yielded to

ten grain doses of the drug, given one half hour before food, and there was no return of this most distressing symptom.

A patient suffering from exophthalmic goitre about a year ago consulted a specialist in regard to a severe tinnitus aurium from which she suffered; bromide of potassium was prescribed in full doses. At first the patient seemed to get some relief from the remedy, and it was continued for several months; during this time the patient developed severe mental excitement with true delusions. Suspecting the remedy, it was discontinued, and in a few days the mental excitement subsided with a marked increase of the tinnitus. At this time, strontium bromide was substituted with full as good effect upon the symptom, and the patient has continued to take it during the past three months, with no return of the mental excitement; the delusions continue however.

We are occasionally consulted by a class of patients that are plethoric, who complain of a general feeling of lassitude, frontal headache, constipation, a disposition to sleep all the time, various skin diseases; the urine is loaded with urates, and frequently the heart's action is feeble, due to commencing fatty degeneration; these patients are sometimes fat, other times lean, but are always overfed. Any or all of these symptoms may exist, but will surely be relieved by the use of bromide strontium administered before meals, accompanied by a restricted diet.

In other cases of digestive disorders accompanied with acid fermentations, and the formation of gases of decomposition with chronic diarrhœa, the bromide has given me excellent results.

Strontium iodide occurs in colorless, transparent hexagonal crystals, having a bitter saline taste, freely soluble in water and alcohol. Like the bromide salt it is incompatible with solution of the sulphates and carbonates of soda, potash, and lime, but is not incompatible with other iodides.

Iodide of strontium is an excellent tonic and alterative, and may with safety be prescribed in any case where the potash salt is indicated. In quite an extended use of the drug I have never known it to induce the gastric irritation or palpitation of the heart so common in the administration

of iodide of potash in full doses. Its effects in catarrhal asthma, chronic bronchitis and cardio-pulmonary affections have been most satisfactory. The drug is quickly eliminated by the kidneys, the strontium seeming to supplement the action of the iodine by its own peculiar action on the functions of nutrition.

In connection with the above, I wish to report the following case:

Mr. B., age about seventy, has had a catarrhal bronchitis accompanied with asthma for the past ten or fifteen years. At the time the strontium salt was prescribed he presented the following conditions: catarrhal bronchitis of both lungs with paroxysmal attacks of asthma, bad cough with profuse expectoration, has been unable to lie in bed for over two years, body emaciated, appetite poor, urine scanty, no sugar or albumen present, marked arterio-sclerosis, œdema of both feet and legs; pulse one hundred to one hundred and twenty per minute, mitral insufficiency with dilatation of the heart, takes little food. For several weeks, from one to three pints of water had exuded from the feet and legs every twenty-four hours. The patient had been treated with iodide of potassium at various times, always with considerable relief, but he had been unable to continue the drug for any great length of time or in anything like the full dose on account of the gastric irritation which it produced. We began the treatment with ten grains of strontium iodide every six hours, subsequently the dose was increased to twenty grains. Within one week all the symptoms had improved. The cardiac functions were better performed, the asthmatic attacks had subsided, and within one month the patient was able to move about the house. The remedy has been continued about every other month during the year, and I have seen the patient at work in his garden within the past week.

From my observations of the action of the iodide of strontium, I am satisfied that it is safe to prescribe it as a substitute for the potassium salt, and, while the dose is about the same, the remedy can be pushed to a dose far beyond the limit of safety with the potassium salt, and that without fear of producing symptoms of intolerance.

Strontium lactate is a white granular powder, odorless, and has a slightly bitter, saline taste. Soluble in about four parts of water and freely soluble in alcohol; dose from five to sixty grains. Cases are reported where as much as one hundred and sixty grains have been administered with no untoward effects. The lactate has been often prescribed for Bright's disease both in acute and chronic forms, with excellent results. Constantin Paul concludes that it is indicated in parenchymatous nephritis, the rheumatismal and gouty forms, but is not useful in interstitial nephritis. Dujardin-Beaumetz confirms these statements, and says that when he has administered the remedy in cases of albuminuria, he has obtained uniformly a reduction in the quantity of albumen passed; that, while it affects the most important symptoms favorably, it does not remove the pathological condition. The remedy possesses the advantage over other drugs in the treatment of this disease in that it promotes the appetite, aids digestion and assimilation, and can be administered for a long time continuously with no bad effects.

In two cases of albuminuria of pregnancy, in which I have made use of the lactate, the most gratifying results have followed. In one case where there was severe headache, insufficient urinary discharge, general dropsy and the symptoms of uremia present, and where diuretics, purgatives and diaphoretics had signally failed to give relief, the lactate was substituted in fifteen grain doses every four hours, with a marked diminution of all the symptoms and with a decrease of more than one-half the amount of albumen excreted within forty-eight hours. The improvement in the general condition of the patients was noted from the beginning of the treatment.

In several cases of cystitis in the aged, due to hypertrophy of the prostate, the drug was given in connection with buchu with marked amelioration of the symptoms. Although the lactate does not seem to possess any diuretic properties, nevertheless its action upon the urinary organs seems to be salutary in the extreme.

Professor Germain See, in the treatment of affections of the stomach, considers the strontium salts as far superior o the alkaline carbonates.

Bartholow states that the phosphate of strontium appears to rather improve the appetite, promote the activity of assimilation and increase the body weight. The phosphate more especially is a reconstituent, an agent having the power to increase the nutritive energies. Recently the salicylate of strontium has been highly extolled in the treatment of rheumatism, I have, however, had no experience with the drug.

For a number of years I have been satisfied that many of the untoward symptoms that follow the use of the potash salts in full doses are due as much or more to the potash which they contain as to the iodine or bromine. As we all know potassium is always a poison, even in small doses when often repeated. In bromide of potassium, potash constitutes one-third of the salt, and when given in large doses it cannot fail but exert its toxicological effects.

Well known authorities have long ago demonstrated that there was far less danger in the use of the sodium than the potash salts.

If we have in the strontium salts remedies that can be used in full doses and for a long time without the unfortunate effects that sometimes follow the use of the potash salts, it behooves us to give our patients the benefit of the fact.

VALEDICTORY ADDRESS TO THE GRADUATING CLASS, 1898, AT THE 26th ANNUAL CONVOCATION UNIVERSITY OF BISHOP'S COLLEGE, FACULTY OF MEDICINE.

By J. W. STIRLING, M.D.

Mr. Chancellor, Mr. Dean, Members of Convocation, Members of the Graduating Class, Ladies and Gentlemen :—

The Faculty of Medicine has honored me by asking me to deliver the farewell address to the graduates in medicine of this year.

Although I feel myself unable to perform this duty properly, yet I gladly undertake it as enabling me to offer a few words of kindly farewell to my student friends.

Thinking over the various subjects on which I might speak to you materially, the idea occurred to me that courage, *true courage*, was the one great moral essential in a medical man's career, superadded to or conjoined with hard, earnest work.

I accordingly have chosen the latin motto "*Virtute et Labore*" as embodying this and as being the main central thought I would wish you to carry away.

Courage—the word—even glanced at casually means far more than bravery—bravery suggests rather the idea of single acts, whereas courage means a prolonged struggle, and it is a struggle of a life time which you have now to meet.

Courage itself presupposes the existence of evils which we have to face and combat. In your career as medical practitioners these evils will occur in many different forms. Conditions must and will arise calling upon you to exert your moral, your mental and your physical courage, conditions over which you cannot possibly have any control, but which you must bravely face.

Let there never be any shrinking from your duty; decide what that duty is and do it—be courageous.

In forming your decision in your medical career as in all the other phases of life, you must weigh carefully the pros and cons, judge calmly, and having drawn your conclusion and arrived at a decision, boldly support it.

You may have to face the adverse criticism of many, but it is better far to act rightly and conscientiously and to receive the approbation of the "just" few than the adulation of a multitude who are incapable of correctly appreciating your motives.

Let a "*meus conscia sibi recti*" be your highest reward. But, withal, be not so set in your opinions as not to be open to conviction if perchance some faulty point in your conclusions be shown you. The truly scientific mind must be always open to proof.

Having then reached your decision, if thereafter action be called for, do not stand as one shivering on the brink of a stream, but jump boldly in and trust to your knowledge, nerve and pluck to bring you through.

Remember that our fears are traitors, and oft we lose the good we might attain by fearing to attempt.

Your moral courage will also be continually put to the test, and I would urge upon you that both virtue and vice are voluntarily, and, as Aristotle puts it, "the means to attain either a vicious or virtuous end are deliberate—they are duly thought over and acted on.

You know what is right and virtuous, and failing then to perform an honorable act when it is possible is just as faulty as the direct performance of a vicious act.

Few men are exposed to temptations and to the same extent that a medical man is; be true to yourselves, and

exert your moral courage, nor run any risks of wrecking your lives with all their possibilities of usefulness to your fellow-men.

Courage is by no means always noticed by others, for it very frequently happens that after all the lives which show the most courage that are lived nobly and heroically are often those of which the world knows least.

Lofty courage dwells in a heart which braves an adverse fate. The individual who for the sake of duty must sometimes stand aside in a quiet place and see others do the valient deeds which help on the progress of the world, when he knows that he too has the will to do, the soul to dare and the power to perform, that man is more hero-like than many a famous conqueror.

You will all have your duty to perform. Your sphere may be small or large, but you yet have your duty to do—do it then truly and conscientiously.

You will surely have rebuffs and falls. No one escapes them, but go forward with a heart for any fate. You may be misjudged, but fully aware you are acting rightly adhere to your course.

> Oh fear not in a world like this
> And thou shalt know ere long,
> Know how sublime a thing it is
> To suffer and be strong.

Some years ago you voluntarily entered our University as students of medicine, and during your course of study have had to follow the rules laid down for your guidance and tuition by the University. To-day you receive your degrees, and leave us to go out into the world, and now that our control over you in your medical career ceases, we may surely demand with right that the oath you take to-day may be no mere empty form.

We ask you to act in your life work so as to reflect credit on your Alma Mater, to have the courage to countenance and perform only noble elevated deeds, to act rightly as your conscience dictates.

You will be called upon to face death and danger to yourselves, do it steadfastly and calmly. It requires courage of a higher type than that which leads a brilliant charge in the excitement of a battle, in that your courage has to be calm and deliberate. You will frequeutly have to take your lives in your hands in the discharge of your duty. But no nobler sacrifice can you make than to risk your lives for your fellow-men.

How many, many noble examples have we of this in our profession.

Shrink not then from the call of duty. Remember the medical profession is not one for poltroons or cowards.

But in addition to this courage there must also be work, and that very strenuous and persistent. Your days of study by no means cease with the acquisition of your diplomas ; indeed your real study is only beginning. You simply have laid the foundation on which you are to build.

It is a truism that nothing can be attained without labour or effort, and most especially does this apply to our own profession. It is one continued effort and striving in study and practice from the day you take it up until you finally lay it down.

The illimitability of our profession is to me one of its great charms. The feeling that there are always greater heights yet to be scaled, that there are constant advances to be made.

Unless we are going to fall behind, it is absolutely necessary that we study and work unceasingly. We can only afford a respite in order to brace ourselves for still greater efforts. Truly the life work of men like Lister, Pasteur, Haffkin and others is noble and inspiring, much more so indeed than of the greatest conquerors.

If one but considers the thousands of lives saved, the pain and suffering ameliorated as the result of their labours, surely these men are the greatest benefactors of the world.

In the absolute and self-abnegation and fearlessness of Haffkin and men like him during the course of their researches in plague-stricken districts, and in their devotion to and love of their work, we find noble examples worthy of emulation.

There are such grand possibilities in our life work. We may not be great men like Lister and the others, or make some vital discovery which will set the scientific world afire, yet we can and should avail ourselves of our possibilities to the utmost.

We can try to add some stones in the grand scientific structure now being erected by our profession, or failing this we may be able to help with some morsel of mortar to bind together the stones already in place.

To this end, *study* your work and *do* your work carefully and thoroughly, not haphazard. Keep full case reports, collate your facts and study them out. If in time you happily build up a large practice, endeavour to keep it within such bounds that you have time for thought, otherwise you must perforce scamp your work, and thus fail to do justice to your patients or yourself.

The first few years of your professional life are bound to be slow, and you will likely have plenty of spare time. These

years are a golden opportunity which I would urge you not to lose. Take full advantage of them in pursuing quiet study, and perhaps some research in one form or another, later on when your practice increases, it will be very difficult if not impossible to secure sufficient time for any prolonged uninterrupted study.

If possible try to become attached to a hospital in some position or other, or, failing this, you should during your slack years attend hospital practice if possible regularly. There are always crumbs of information to be picked up, and at any rate it will prevent any chance of that direful result, becoming "rusty" in your work.

Let your work be continuous and above all thorough, then, come what may, you can feel that under any circumstances, adverse or otherwise, you have in any given case done your best for your patient.

Remember the life of your patient is in your hands and you are accountable to God as well as to your fellow man.

As our profession in its truest phase is such a noble one and calls for such entire devotion, any exhibition of selfishness or meanness appears most pitiable and contemptible. Hence the use of it for the mere acquisition of money is unpardonable, and indeed is very apt to fail.

If you enter on your professional career with the one object of acquiring wealth, I would urge you forthwith to abandon medicine; with such an aim in view you are most unlikely to do your suffering fellow creatures any good, and will certainly bring no credit on the profession.

Let not the sordid overwhelm the high aims of your profession—Let the latter stand first and highest, and the reward to your conscience and soul will be infinitely more satisfying than simply making a travesty of the noble healing art in your greed for wealth.

But, mark you, I by no means decry fees, for I hold a labourer is always worthy of his hire, yet there is so much that is elevating and inspiring about our work rightly practiced that it appears a sad degradation to turn it into a purely money-making business.

It is this that causes the bitter enmity of all true medical practitioners against the numerous patent remedies which appear from time to time; they are preparations which may sometimes do good or effect a cure, nevertheless they are secret preparations, which are manufactured for the sole purpose of making money, not from any philanthropic motive—I would beg of you never to use or countenance them—There can be no secrets in the true healing art; any discovery for the benefit of suffering humanity must be the common property of all.

You now go forth as members of the noblest profession—and I would like you to hear what Francis Bacon said :—"I hold every man a debtor to his profession—from the which of course as men do seek to receive countenance and profit so ought they of duty to endeavour themselves, by way of amends, to be a help and ornament thereunto."

If we are only true to ourselves and have the courage of well founded-convictions, and have truly, honestly laboured with our might and main, we can when the time comes for us to lay aside the armour of our life's warfare, feel that we at any rate have fought a good fight and not lived in vain, that we leave this world none the worse but rather the better of our labours.

You have grand possibilities ahead of you ; I would beg of you not to throw them away or in any manner prostitute the talents God has given you—work while you can with all your might. Do the utmost good you can, and, although you may fail of approbation from your fellow men, you will at any rate have the consciousness of doing your duty to the best of your ability.

I can not close without impressing on you again and yet again the grand nobility of your profession. Oh my friends honour it with all your heart, and in honouring it you will do honour to yourselves.

Be true to your profession ; in so doing you will be true to yourselves ; and you cannot then be false to any man.

Some of you I may never meet again. Let *Virtute et Labore* be your watch-word. Strive for it, labour for it. Acquit yourselves like men. Above all place implicit trust in God. You will often need greater help than man's in the troubles you are sure to meet.

In the name of the Medical Faculty I bid you a kind adieu and affectionate God-speed.

May God Almighty guide you and help you. Remember :

"Virtute et Laore"
Et jam Vale Vale.

VALEDICTORY OF THE GRADUATING CLASS, 1898, UNIVERSITY OF BISHOP'S COLLEGE, FACULTY OF MEDICINE.

By MacD. FORD, C.M., M.D.

Mr. Chancellor, Mr. Principal, Members of Convocation, Ladies and Gentlemen :—

On this solemn occasion when one is called upon to address an audience so numerous and so select, and also containing so many learned men, assembled from all the province, and even from more distant points, who have come together to lighten by their presence the brilliancy of our annual

Medical Faculty Convocation, one cannot help feeling a certain regret for the choice which his fellow students have made in entrusting to him the onerous task of voicing their sentiments to such a learned gathering.

Nevertheless, while thoroughly appreciating the responsibility which rests upon me, I feel an honest pride, wholly incapable as I am, in having been entrusted with the duty of rendering the traditional "Valedictory," and to thank you on their behalf for leaving your occupations, and perhaps your pleasures, in order that you might come to this assembly and inspire, by your presence, we, young men, who are about to run our race in the occupation which we have chosen as our life's work. To inspire us who have such a great need of the sympathy of those around us, and of knowing that behind them, other hearts are beating in unison with our own. For although our profession may be different from yours, yet we are destined to live the same life, to rejoice in the same joys and to be saddened by the same sorrows. At the present time you are well aware that the medical profession is not what it formerly was, when the medical man separated himself from the rest of mankind and wrapped himself in a certain cloak of mystery almost thereby acquiring the name of sorcerer. At that time when certain privileged beings only had the means of studying the physiology of the human body, the ignorant masses almost placed their healers on a level with God, and many quacks knew how to make capital of this instinctive fear of humanity, which is often unable to distinguish between he who knows and he who knows not. Happily in our day this has been entirely changed,—thanks to the rapid march of science—thanks to the benefit of an instruction which is embracing the world, men are now given to reason to find out the "why and the wherefore" of that which formerly appeared incomprehensible. And after incessant toil, they have succeeded in drawing from nature a reply to all their questions.

And naturally in this continual evolution the medical man has rather been the cause of its birth, by going as he has deep into the study of men and nature and not being content as he formerly was—say two centuries ago with cutting or bleeding—a butcher, however unskilled, might in a short time arrive at this point of medical science; but the doctor of to-day has a higher aim, nobler aspirations—that of enriching the poor, without empoverishing the rich. That of forcing nature to yield up to him her secrets, which he will make use of to cure his fellow man. And in order to reach this admirable result, the physician must study the different characteristics of the materials of which the universe is made. Enrich the pharmacopœas by the manipulation of fruits of

our agricultural productions in order to transform them into substances which will preserve the life of man. Draw from the study of electric forces the different improvements of which our profession has such need ; know by astronomy the conditions of the climates of the globe. Obtain from mechanics a new and better idea of natural forces. In short—to lighten, to simplify, to alleviate the work of millions of individuals, and thus prolong their existence.

In short—the physician of to-day has to be an astronomer, a chemist, a biologist, a naturalist, a minerologist, a mechanic and a botanist. It is necessary for him, in a comparatively short space of time, to grasp all branches of science so that he may become versed in each one ; and that he must continue to study with zeal and perseverance always and unceasingly, for science is marching onwards with rapid strides and to stop is to fall in the rear. And when he shall have realized the dreams of his ambition and when the evening of the day comes, he will feel that he is entitled to rest, with the conscience of having added to the common treasury from which humanity draws her resources ; and without which humanity would have otherwise remained in her primitive condition of poverty.

Even at this time, the doctor shall be monopolized by his social duties ; he will have to remember that if he has been considered as one of the benefactors of society, he is also a man, and should endeavor to practice often in spite of himself, and often without the slightest aptitude, the difficult art of pleasing all without offending any ;—too happy, if looking forward to a well merited repose, he be not rudely awakened in order to attend some sick man in agony.

This is the life of a medical man—a life of labor, self-sacrifice and devotion.

He is desirous of knowing, indifferent to all other pleasures. *Fortune* he esteems as nothing. *Poverty* he sets at naught. Eager for work, hungry for science, he has his eye continually turned towards the truth, like the magnet toward the "polar star." He seeks out this truth through fatigue and peril; without truce and without repose, never once faltering. He keeps in himself the sacred fire of knowledge burning in spite of the discouragements from without, full of that ardent enthusiasm one feels when working for the benefit of the centuries to come, and that expectation of delight which he will experience when there lies open before his mind, vistas which no human eye had ever before seen. This is the life that my fellow students and myself have chosen,—not that we think ourselves stronger and more skillful than others ; but as the law of labor is encumbent upon all, we all must work. It is the first duty towards our country, our

family and ourselves, and of all the professions open to us we have chosen the noblest.

Do not think that I wish to raise up our profession at the expense of others—all workmen are honorable, whatever they may be, and the humble laborer who uses the pick and shovel is no more to be dispised than the learned scientist who enriches the world with a new idea. But at the present day the rôle of a physician is all the more difficult, inasmuch as the "art of killing" has made a well marked advance. We laud to the skies, the name of the inventor of some new engine of war; we guild with lustre the advocate, who by his eloquence, has succeeded in freeing from the hands of the law some four-fold assassin, we receive with acclamation often the author of dissolute romances; but we leave aside the names of many of our professors and lecturers who in the silence of their work, without noise or show, have succeeded in saving thousands of lives. And if we are so proud of the study of medicine, and if we appear to you somewhat vain of the title of doctor—throw the blame on our dean, on our professors, on all those, who, at Bishop's College have taught us to esteem them and consequently to esteem ourselves. During these years, without sparing their trouble, or even becoming fatigued, these men, as modest as they are learned, have raised our sunken courage by the gift of their ideas, by the benefit of their experience, and by the enobling energy of their enthusiasm. They have endeavored to raise us little by little to their level, we who could never attain that height alone. Therefore, can you blame us for having a little pride, and on this memorable day, in the presence of you all we thank publicly our professors for their efforts in inculcating in us the everlasting principles of scientific truth. Allow me, therefore, professors and lecturers of our Faculty of Medicine, to express to you the respectful sentiments which we all entertain for you and your instruction. Our gratitude will last as long as our lives, and it will not be without some emotion that later on in the trials which the future has in store for us, we will remember the years spent at Bishop's; and also perhaps, reproach ourselves for not having paid sufficient attention to your lectures. Pardon us, Gentlemen, for we are yet young; but have learned from you not to be idle, but to be men, and to bring our stone to help in the construction of the social edifice. And, since the theory of medicine would not be much unless practice came to its aid, we extend to the authorities of the different hospitals who have placed their institutions at our disposal, our sincere thanks.

May those who come after us keep in their memory the souvenir which we leave to them of the benefits for which we are indebted to you.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

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PSEUDOLEUKEMIA INFANTUM.

Alfred Stengel, M.D., Instructor in Clinical Medicine, University of Pennsylvania, writes on this subject in the *University Medical Magazine* for April. He first objects to the term and the description of the condition as a disease, and alludes to facts regarding the morphology. He does not regard it as a separate disease. Von Jaksch, who first described it, mentions enlargement of the liver and spleen as symptoms, anæmia, reduction of red cells, and marked leucocytosis; but the children usually recover, unlike the results in leukemia. The splenic enlargement is due to chronic hyperplasia, also that of bone. There is no lymphomatous infiltrations. Von Jaksch refers to very large leucocytes, enclosing red cells, or fragments, large polynuclear neutrophile cells, poikilocytosis and endoglobular changes. Loos and Luzet have described abundant nucleated red cells, many showing karyokinesis. But no diagnostic blood characteristic has been described. The factors warranting a diagnosis, according to von Jaksch, are great reduction in the number of red cells, leucocytosis, less than in leukemia, unequal enlargement of the liver as compared with the spleen, and a tendency towards a favorable termination. He regards it as a definite disease, and does not regard syphilis or rickets as causes. Although other observers have found either one or the other of these conditions as generally present, Dr. Stengel claims that we should not consider the state of the blood alone in considering diseases of the blood. Infantile leukemia has been looked on by some as a connecting link between leukemia and pernicious anæmia, but the other pathologic lesions do not warrant this and other points in regard to ferruginous pigmentation of the liver and the urine have not yet been determined. Dr. Stengel and Dr. C. Y. White have examined the blood of 45 children, and find marked difference between it and the blood of adults. Thus leucocytosis occurs much more readily in children than in adults; the mononuclear leucocytes are relatively more abundant than in adults, and this is still more marked in diseases showing leucocytosis; the mononuclear leucocytes are frequently excessive in size and commonly larger than in adults. There is not a tendency to marked reduction in the number of red corpuscles, even in severe illness, although marked reduction of the number of red corpuscles occurs in cases of secondary anæmia of infancy. Many cases of pernicious anæmia of childhood are doubtless of this sort.

ON DIAGNOSIS.

An editorial (*Philadelphia Medical Journal*, January 8, 1898) in this journal says: It is not the end of diagnosis to determine the name of the disease from which a patient is suffering. It is a great satisfaction to know John Smith has typhoid fever; it is much more satisfactory to know that John has typhoid fever in the second week; that he has probably no serious local lesions; that his general condition is good, and his heart sound. This expresses in a way the difference between a good diagnostician and a poor one. Some men are pleased to be able to label every case more or less accurately; this is but the first step in diagnosis. It is the clinician's duty to recognize every abnormal condition presented by a patient, and the probably pathologic causes. Refined diagnosis goes still further; it makes clear the interdependence of various morbid states presented by one patient. An individual may have two distinct diseases at the same time; much more frequently the several conditions arise in sequence, one causing another, or all may be due to one underlying morbid process. We have known three clinicians of world-wide reputation make the diagnosis respectively valvular heart-disease, abdominal aneurism, organic disease of the spinal cord in the same patient; not one recognized the three conditions present or the fact that general arterial disease was the underlying evil. Accurate treatment follows naturally upon accurate and ultimate diagnosis. In other cases, if inaccurate, the treatment is accidental.

CHANGES IN THE NERVE-CELLS IN FEVER.

At a recent meeting of the Berliner Verein fur innere Medicin (*Deutsche medicinische Wochenschrift*, February 17, 1898, *University Medical Magazine*), Goldscheider and Brasch showed Nissl preparations from the cord of a child that had succumbed to scarlet fever on the fourth day. The terminal temperature had been from 40.5° to 40.9° C. The ganglion-cells were smaller than normal and pale, and the protoplasmic indistinct; the nucleolus in some cells was angular, and the protoplasmic processes were swollen. As these changes corresponded exactly with those found by Goldscheider and Flatau in the cord of a case of tetanus with fever, dying on the sixth day, and likewise with those obtained in rabbits exposed to high temperature. The authors were inclined to attribute them to the influence of the temperature, and not to the action of the toxin of scarlet fever.

As regards the tetanus case, the lesions found were different from those seen in animals poisoned with tetanus-toxin, in the latter case the nucleolus and Nissl's bodies swell, and later break down, while in fever the nucleolus becomes smaller and angular and Nissl's bodies dissolve. Brasch found similar febrile changes in the ganglion-cells in a case of meningitis with high terminal temperature.

THE FORMATION OF MUCUS.

A. Schmidt (*Sammlung klinischen Vortrage*, No. 202, February, 1898, *University Medical Magazine*), has devoted a good deal of attention to the study of mucous secretion, and in these lectures

collates a number of facts that may profitably be reproduced in this department. There are two principal forms of mucinogenous substances: the nucleins and the mucins, the former containing phosphorus, the latter not. All mucins are not alike; thus, that of the stomach under normal conditions does not give the characteristic mucin reaction, while in certain pathologic states it does. Regarding the function of mucin, the author thinks that they are very important. Mucin is not germicidal; it is, however, a poor soil for the growth of bacteria. As to the question whether the cells forming mucin always perish after secreting the substance, he is inclined to the belief that they do not, although their longevity is limited.

The secretion of mucus increases on irritation, but if the latter is too severe, the cells die and secretion is suspended. Hence the secretion, in catarrhal inflammations, of tough mucus is a good sign, indicating that the mucous membrane is not seriously injured. In some inflammatory conditions of mucous membranes, mucus is absent from the discharges; this may be due to digestion of the mucus, or to its decomposition by bacteria. The hay bacillus, the bacillus coli, and the typhoid bacillus, as well as others, have the power of liquefying mucus. The presence of pus, and a discharge associated with the persistent absence of mucus indicates atrophic inflammation of the mucous membrane in question.

As the best clinical test for mucus the author recommends microscopic staning. Mucin reacts with basic, nuclein with acid dyes. Thus, from a mixture of acid fuchsin and methyl-green, pneumonic sputum, which consists largely of nucleins, selects the fuchsin, mucus, the methyl-green. The method is as follows:

A small, pea-sized, transparent, glassy flocculus of sputum is placed in a test-tube and agitated with a 5-per-cent. solution of bichloride of mercury in alcohol. Albuminous sputa disintegrate rapidly, mucinous slowly. After sedimentation the alcohol is poured off and the tube filled with distilled water. Three drops of a stock-solution of the stain (one gramme Biondi's salt to thirty cubic centimetres of distilled water) are then added. The tube is turned slowly for from one to three minutes, and, after decantation, the sediment washed once or twice with distilled water. Brick-red color of the flocculus indicates pneumonia. The color must be brick-red, not violet-red.

Microscopic examination of the excreta for mucus is of value; the acetic acid test is unreliable.

SECRETION NEUROSIS OF THE COLON.

In Mathews' Quarterly Journal of Rectal and Gastro Intestinal Diseases for January, 1898, BYRON ROBINSON discusses this subject, and gives the following conclusions:

1. The above disease of the colon should be termed secretion neurosis and enteritis. The first is of neurotic origin and course.

2. Both secretion neurosis and enteritis may coexist.

3. Secretion neurosis of the colon occurs chiefly in neurotic females (eighty per cent.).

4. It is closely associated with genital disease.

5. It is frequently preceded by constipation (a neurosis of the fecal reservoir or of the inferior mesenteric ganglion).

6. The continuation of the disease is partly due to an irritable, vicious habit of excessive epithelial activity.

7. The disease is characterised by colicky pains with the evacuation of mucous masses.

8. It is not fatal, variable and erratic in attacks, with impossible prognosis as to time.

9. Microscopically the evacuations appear as membranous yellowish-white masses of mucus.

10. Macroscopically one sees hyaline bodies, cylindrical epithelium, cholesterine crystals, triple phosphates, round cells, various kinds of micro-organisms, and pigment.

11. Chemically the evacuations consist of mucin and albuminous substance.

12. Secretion neurosis of the colon is comparable to the secretion neurosis of the endometrium (membranous dysmenorrhea) or bronchial croup.

13. Secretion neurosis of the colon appears to be limited chiefly to the part of the colon supplied by the inferior mesenteric ganglion—*i.e.*, to the fecal reservoir (the left half of the transverse colon, the descending colon, the sigmoid, and rectum).

14. It is a disease of the sympathetic secretory nerves, and is analogous to the disease of the motor and sensory nerves of the viscera.

15. Its treatment consists in removing the neurosis, which lies in the front ground, and regulating the secretion, which lies in the background.

16. Three views exist as to the above disease, which certainly embrace more than one pathologic process, viz: (*a*) That the disease is enteritis (catarrh); (*b*) that it is simply excessive secretion of mucus (colica mucosa); (*c*) that it is a secretion neurosis of the colon (nervous).

A REFRESHING BATH.

The following is the formula of a "rejuvenator" from which Mme. Sarah Bernhardt is said to get unfailing refreshment. It is a liquid in which she is bathed from head to foot—an *eau sédative* Madame Bernhardt calls it. The prescription is as follows: Two ounces of spirits of ammonia, two ounces of spirits of camphor, one cup and a half of sea-salt, two cups of alcohol. Put all into a quart bottle, and fill with boiling water. Shake before using. The method of application is very simple. The body is bathed with a soft

sponge dipped in the undiluted liquid, and dried with the slight friction of a smooth towel. After the bath the stiffness and soreness of fatigue are all gone, the circulation is stimulated, and a gentle languor is induced, followed by a desire to sleep.—*The Practitioner.*

EXERCISE TREATMENT IN NERVOUS DISEASES.

Goldscheider (*Deut. Med. Woch.*, 1898, Nos. 4 and 5, *Gaillard's Medical Journal*) more especially refers to tabes dorsalis and some other diseases. He maintains that the ataxia is due to a disturbance of the muscular sense. He first learned to use exercise treatment in v. Leyden's clinic, but this method has been subsequently largely extended by Fraenkel. In the so-called paraplegic stage of tabes slight flexions and extensions, etc., of the limbs may be made when the patient is in bed. Help may be given by lightly supporting the thigh or leg. A chair may be inverted over the foot of the bed, and the patient can then exercise himself in touching the cross bars or by putting the feet in between them.

The movements are first made with the eyes open and afterwards with closed eyes. Ample periods of rest must be allowed so as not to produce fatigue, otherwise an exhaustion lasting over several days may result. The author confirms Fraenkel's opinion that even in these advanced cases improvement may be produced and the patient may even walk again. Some patients do not improve, and sometimes the exercises have to be given up owing to the pains which are apparently induced by them. In less advanced cases various movements may be practiced to improve the gait, and the author figures many pieces of apparatus adapted to this end. A chair on four legs with rollers may be useful. The treatment must be persisted in over long periods of time.

The chief point lies in many movements performed without fatigue and with intervals of rest. The author draws attention to the absence of the sense of fatigue. In some patients there is an atony of the muscles, and here electricity and massage must be employed as well. The knee and hip joints may be supported by bandaging. The author then refers to the treatment of intentional tremor by exercises. He looks upon this tremor as closely allied to ataxia, and as capable of improvement by exercises. In chorea some improvement may also be produced, but the exercises should be carried out only once in the day or once in two or three days. The good effects of this treatment in writer's cramp are well recognized. In athetosis also some improvement

may be produced by long-continued exercise treatment. In speaking of paresis and muscular atrophies the author draws attention to the value of exercises carried out in a bath, and especially in peripheral neuritis. In neuralgias, etc., exercises, particularly of a passive form, may be useful, In articular pains left after rheumatism, and more especially after contusions, this treatment is valuable. Goldscheider thinks that much more attention should be given to exercise treatment.

INCONTINENCE OF URINE IN CHILDREN.

Incontinence of urine, says Dr. J. A. Coutts (*Treatment*, Vol. I, Part 1, No. 13, p. 289, *Gaillard's Medical Journal*), may be associated with many and varied morbid conditions, in which it plays a very unimportant part. In some instances it may be the first symptom to call attention to such serious disorders as diabetes, calculus, hydronephrosis, and others. In nocturnal epilepsy, incontinence of urine may furnish the only evidence of past attacks.

In infancy, incontinence of urine is physiological, and is due to the urinary reflex being as yet not under the control of the brain. Its persistency beyond infancy is probably owing to imperfection of control unless it be referable to bad habits and poor training.

In treatment, the ordinary routine practice of awakening the child at stated intervals to micturate is mentioned and commended. This simple procedure will cure the vast majority of cases. In addition to the last, restricting the liquids in the child's dietary during the latter hours of the day seems credible to all.

However, in obstinate cases, if on examination the urine presents a high specific gravity and a high degree of acidity, then, instead of limiting the liquids, the author advises that trial be made of encouraging the child to drink freely toward the end of the day. In a few cases by this reversal of the common practice signal success has been scored.

Of drug treatment belladonna takes first rank. But that belladonna often fails is admitted by all. Some of these failures doubtless arise from the method commonly pursued by giving the drug in divided doses throughout the day. A much more efficient plan is to give one single dose in the evening, and to increase this gradually every four or five days. In this way a large single dose can be gradually worked up to, and, if the incontinence ceases, can be gradually lessened until the drug is finally abandoned. Belladonna cannot be fairly said to have failed till this method has been tried. Of

other drugs the author ranks lycopodium first. While belladonna acts by paralyzing the detrusive muscular fibres of the bladder, lycopodium is stated to have a more selective sedative action on the vesical mucous membrane. The author claims lycopodium was successful in numerous instances where belladonna has entirely failed. The method advised is to give twenty drops of the tincture three times a day to a small child and work up gradually until doses of a dram are given at the corresponding times. Lycopodium has been claimed by some as almost a specific in incontinence of urine, but, while it is not that, it is certainly deserving of more extensive trial.

Bromide of potassium is mentioned as being of benefit in those cases in which the act of micturition ensues when waking is imminent or actually takes place. Here the beneficial action lies no doubt in its hypnotic effect rather than in any other action it may have on the nervous system. Strychnine is useful when the incontinence is accompanied with anemia, lassitude, and other departures from the normal health. Then a combination of iron and strychnine is of service.

Of other drugs, such as opium, chloral, etc., the author pleads ignorance.

When drugs fail there are still other measures that may prove of service in obstinate cases. It has been noticed that in many instances the child retains his urine while lying asleep on his side, but that as soon as he turns upon his back emission of urine takes place. The child can be prevented from turning on his back by fixing an ordinary bobbin over the lower spine by means of strapping. With this arrangement, whenever the child attempts to turn on his back the bobbin either wakes him up or else he returns to his former position on his side. In either case the urine is retained in most instances.

Circumcision in incontinence of urine, without phimosis, is uncalled for.

RHEUMATISM IN CHILDREN.

An editorial in the *Archives of Pediatrics* for January, 1898, says among those who have studied rheumatism in children most carefully and have done most to correct older errors of belief regarding it is W. B. Cheadle, of London. In a recent article in *Treatment* he describes the various peculiarities of the disease in the young and writes most judiciously regarding the treatment. He refers particularly to the fact that the risk of cardiac complications in acute rheumatism is in inverse proportion to the age of the patient;

hence the great importance of an early and correct diagnosis of rheumatism in children. But such a diagnosis is, unfortunately, often very difficult to make, and not uncommonly acute rheumatism is only thought of as a cause of some childish ailment when irremediable damage has been done to the heart by an endocarditis or pericarditis which has run an insidious course. And yet, if sought for carefully, there are in nearly every instance certain symptoms which ought to suggest the true nature of the ailment. The mistakes made in the diagnosis of acute rheumatism in children arise chiefly from the fact that in this class of patients the symptoms of arthritis, acid sweats, and pyrexia, to which we trust chiefly in diagnosing the disease in older people, are less prominent. The disease runs what in the adult would be called a subacute course.

In acute rheumatism of early life arthritis is at its minimum; endocarditis, pericarditis and chorea at their maximum; pleurisy, tonsillitis, the vasomotor and hemorrhagic phenomena, and the erythemata and purpura, are more common, tending to decline as puberty is passed. There is also a special tendency in children for the various phases of the affliction to arise independently and apart from one another. This is an important point, which Cheadle was one of the first to point out. Endocarditis or pericarditis may arise in a rheumatic child not only without any accompanying joint affection, but in rare instances without any recognized rheumatic phenomena to give warning of the nature of the true complaint.

As a rule, however, a slight stiffness of the joints, chorea, crop of nodules, or erythema give some slight indication of a rheumatic condition. When a case of endocarditis or pericarditis arises in a child there is *prima facie* presumption that it is rheumatic. If, with the cardiac affections, we have chorea, fibrous nodules, tonsillitis, erythema, or pleurisy, whether these have occurred recently or have cropped up at intervals through months or even years, the cardiac inflammation is almost entirely rheumatic.

The existence of a family predisposition is of great significance. The occurrence of the conditions mentioned above, and even the presence of the subcutaneous nodules alone, which are pathognomonic of rheumatism, are sufficient for diagnosis. As the heart affection is so serious in children this organ should be carefully examined whenever any of these rheumatic symptoms are met with, and in every feverish attack, simple though it may appear, the condition of the heart should be regularly ascertained.—*Medicine.*

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.,

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospital.

A NEW INCISION FOR THE REMOVAL OF THE APPENDIX VERMIFORMIS. (1)

By CARL V. VISCHER, M.D., of Philadelphia.

Until recently, the peritoneal cavity was always opened by an incision through one of the aponeurotic lines, in this way dividing as little tissue as possible, and averting hæmorrhage. This incision was often followed by the development of so-called ventral or post-operative hernia,—hence the necessity for some method to obviate this difficulty. Among the various methods of suturing that were suggested, that of silver wire promised the most favorable results; yet the disadvantages accompanying the introduction of non-absorbable material soon became apparent. This led some operators to endeavor to overcome the difficulty by opening the abdomen through the muscular structures in place of the linea alba, or semilunaris, thus giving more tissue to approximate, and hence the formation of a thicker cicatrix. Then followed the suggestion of McBurney, to open the abdominal cavity by incising the integument and aponeurotic structures alone and separating the various muscles in the direction of their fibres. This method was first practiced for the removal of the vermiform appendix. The incision here is located at a point, however, where the abdominal parietes are largely made up of aponeurotic structures—*i.e.*, in the lateral portion of the anterior abdominal wall. That this incision presents some disadvantages every one who has had much experience with cases of appendicitis well knows. Whereas it answers admirably for the removal of the appendix "between attacks;" it is not so satisfactory in acute cases, particularly those accompanied by pus-formation, inasmuch as one is frequently obliged to enter the peritoneal cavity to the median side of the inflammatory mass, and in this way drain and remove the appendix through a non-infected area. Again, at times, it is quite difficult to locate the appendix, and, finally, the relation of the parts are not conducive to free drainage. It therefore occurred to me that if an incision were made through a more muscular and dependent portion of the ab-

(1) Read before the A. R. Thomas Club of Philadelphia, 1897.

dominal wall the above disadvantages could be overcome, and, in consequence, I have recently been making an incision an inch above and parallel to the crest of the ilium, beginning at the outer edge of the external oblique, and running forward to a point corresponding to the anterior superior iliac spine, or, if necessary, slightly beyond this. Having divided the skin and aponeurosis, the external oblique which is found well developed at this point and its fibres running nearly vertical is separated, after which the internal oblique and transversalis, which are also well developed, and whose fibres run nearly on one plane, are separated, exposing the transversalis fascia. This, together with the peritoneum, is divided in a vertical direction. This will be found to have opened the peritoneal cavity at its lowermost plane and near to the attachment of the cæcum. A finger, now being introduced, invariably comes in contact with the caput coli, which can be readily drawn into the wound, and thereby facilitate the search for the appendix. In suppurative cases, the pus cavity being opened at this point, drainage follows at the most dependent point. Possibly the greatest disadvantage offered by this incision is the depth of the wound, which, particularly in those inclined to be corpulent, may make manipulation somewhat difficult ; the hæmorrhage, which has been found to take place from a small muscular branch of the circumflex iliac artery, can readily be controlled. The advantages are :—first, from the position of the wound it is almost impossible for hernia to occur even when it is allowed to heal by granulation ; second, it offers a dependent point favorable for drainage ; third, the facility with which the cæcum and appendix are found.—*Annals of Surgery, November*, '97,

VASCULAR SYSTEM.

1. Final Report of a Case of a very large Innominate Aneurism completely cured by Electrolysis through ten feet of snarled, coiled, fine gold wire introduced into the Sac.

By D. D. STEWART, M.D., Philadelphia.

The writer reports the result of a necropsy on the case of a very large innominate aneurism on which he, over forty-one months before, had employed galvanism through ten feet of coiled gold wire, which he had introduced, resulting in complete solidification of the sac. The case was one most unpropitious for any treatment. The patient had been an habitual spirit drinker. He was also a syphilitic, had pronounced aortic and mitral disease, with extensive cardiac enlargement, generalized endarteritis, and had also chronic nephritis. The

aneurism formed a large and prominent swelling at the root of the neck. It was regarded as springing from and being limited to the innominate artery. The sac wall was of extreme thinness, and, at least externally was unprotected by clot. This, which was apparent to the eye and touch, was further demonstrated by puncture with needles. At the time of operation the sac wall seemed on the point of bursting externally in several situations over which the skin was extremely thin and bluish.

The result of electrolysis through the introduced wire was very decided. Clot-formation, leading apparently to solidification of the sac, was early manifest. The patient lived for nearly three years and a half after operation, and finally died as the result of the formation of a large thrombus in the middle cerebral artery, the result of the advanced endarteritis present.

The autopsy revealed the aorta dilated from its cardiac origin, but a separate and very distinctly outlined extensive fusiform dilatation existed from one and a half centimetres to the left from the origin of the left subclavian artery at the junction of the transverse with the descending portion of the aorta downward to a distance of ten centimetres. This fusiform sac at its greatest internal circumference is fifteen centimetres. This dilatation—a typical fusiform aneurism—is sharply defined above and below by concentric elevated rings or constrictions of the whole circumference of the aorta. The entire aorta, including the dilated portion, is uniformly thickened. The inner surface of the fusiform sac shows widespread atheromatous patches. The sacculated aneurism springs directly from the root of the innominate artery. The aneurismal sac is approximately the size of a fœtal head at term ; length, thirteen centimetres ; transverse diameter, nine centimetres. The sac is completely consolidated with organized coagula in which lie the coils of wire. The consolidated sac has at its base a small cul-de-sac, the remains of the innominate artery. This, from the aorta, admits the little finger to a distance of four centimetres through an annular ring, sharply defined, two centimetres in diameter. The cul-de-sac was noted to contain in its interior a small coagulum, presumably of post-mortem formation. The sac itself was very firm and wholly solidified, and when cut into was found to be completely occupied by organized material, in the interstices of which lay the coils of fine gold wire. Brain : A large thrombus is evident in the left middle cerebral artery. Softening has occurred in the region of the corpus callosum, caudate and lenticular nucleus and in the internal capsule of the left side.

The method, as practiced and advocated by the author, consists in introducing into the sac, under the strictest antiseptic precautions, a fine silver or gold-coiled wire, previously so drawn that it may be readily passed through a thoroughly insulated needle of somewhat larger calibre than the wire, and, after introduction, assume snarled, spiral coils, that, with a moderate amount of wire, the entire calibre of the sac will be reached unless the cavity be already filled with coagula or the sac be of unusual size.

The wire must be neither in amount nor calibre too great nor too bulky or highly drawn that the results to be desired be interfered with. Nor should the wire be of a material so brittle as steel nor of hard drawn iron lest fracture occur in process of contraction of sac, with danger of rupture; nor should it be of soft iron, lest so great a quantity of detritus result, due to the decomposition of the iron and the formation of insoluble salts under the current influence, even with low amperage, that danger of emboli result.

Silver or gold wire is undoubtedly preferable material. Silver-coppered wire, employed by Loretta in his case, in which wire alone—without galvanism—was used, possesses no advantage over that of silver alone, and if it were used might be provocative of toxic symptoms through the amount of copper dissolved under the current influence.

The amount of wire required depends necessarily upon the calibre of the aneurismal sac, and must be decided upon with the greatest nicety of judgment, since with too small an amount little or no result will be obtained, and with too great a quantity permanent cure through obliteration of sac by contraction of clot cannot be expected. For a globular sac of approximately three inches in diameter, three to five feet are sufficient for a sac of four to five inches, eight to ten feet. How readily these amounts comply with the conditions is shown by the introduction through a needle of a measured amount of spirally-wound snarled wire into globular corked bottles of approximately the size stated.

The anode or positive pole should invariably be the active electrode. This is connected with the wire, and the negative rheophore, a large clay plate, or an absorbent cotton pad of equal dimensions, is placed upon the abdomen or the back. The current is slowly brought into circuit, and its strength noted by an accurate milliampèremeter. The increase is gradual for a few moments until the maximum strength supposed to be required is reached. It is maintained at this until the approach of the end of the session and then gradually diminished to zero, after which the wire is separated from the battery, the needle carefully withdrawn

by rotation and counter-pressure, and the released external portion of the wire gently pulled upon and cut close to the skin, the cut end being then pushed beneath the surface. This latter procedure is facilitated by using care in the introduction of the needle to first draw the skin at the site of puncture a trifle to one side in order to procure a somewhat valve-like opening.

Experience has shown that the current's strength must be rather high,—from forty to eighty milliampères, and the sitting long,—from three-quarters of an hour to one hour and a half. Thus used the following effects may be expected :— The mere introduction of coiled, snarled wire without the conjoint use of galvanism, if practiced judiciously, is in itself a method of value, since the presence of wire, if engaging all parts of the sac, acts both as an impediment to the blood stream and at the same time offers to the eddies set up multiple surfaces for clot-formation. Hence this method has more to commend it than that by mere galvano-puncture with needles. By galvano-puncture, although firm coagula are produced, they are of such trifling dimensions and engage such small areas of sac wall, that, without impeding in the least the blood-current, their dissolution rather than their accretion quickly follows. By the application of a strong galvanic current through coils of wire so disposed that all areas of the sac are reached, it follows without exception, as has been noted in all recorded cases, that consolidation by virtue of clot-formation is promptly and invariably produced. The solidification is rapid, and is generally manifest before the end of the electrical session, through changes apparent to the eye and hand, in the pulsation, and in the degree of consistence of the sac wall. These changes become more decided in the course of a few days, until after a time in the most favorable cases a hard nodule, with a communicated pulsation only replaces the previous expansible tumor.— *British Medical Journal*, August 14, 1897. [*Annals of Surgery* November, 97.]

J. Torrence Rugh (*Philadelphia Med. Jour.*, April 9, 98) describes an original method of applying plaster of Paris to make continuous pressure for the correction of club feet. He utilises continuous pressure by attaching a rubber tube at the knee and connecting it with the end of a lever which is attached to a foot piece and extends out about two inches at right angles to the foot. The foot piece or sole is firmly bandaged to the foot with plaster of Paris bandages which extend only to the ankle. A second bandage begins just above the ankle and extends to some way above the knee with this joint bent at nearly right angles in order that trac-

tion will not cause displacement of the bandage. The piece projecting from the foot piece is placed on either or both sides according as the deformity requires. He recommends the use of this apparatus in all cases which do not need a radical bone operation and in the after treatment of operated cases.

Downes (*Philadelphia Med. Jour.*, April, 2, 98) describes the use of removable rubber bulbs in intestinal anastomosis. He employs three varieties, one for lateral anastomosis where there is side-union of two cylinders with a comparatively narnow neck, the second equal sized bulbs with a filling tube attached in the middle or at one end, and the third having one bulb larger than the other in case of anastomosis between large and small intestines. The bulbs after being placed are filled with air or fluid by means of a bulb syringe, and the dilatation is maintained by applying forceps or a ligature to the filling tube. With this facilitate sewing he uses a stitch knotted continuous Lembert suture so placed as not to invert but approximate the edges. After placing nearly all the sutures the bulb may be deflated and removed, or the sutures may be completed and the deflated bulb removed through a longitudinal slit at one side, which may be closed with a couple of sutures.

PHYSIOLOGICAL ALBUMINURIA AND THE BICYCLE.

It seems from certain observations made by Mûller (*Münchener medicinische Wochenschrift, Centralblatt für innere Medicin*) that in albuminuria that cannot be distinguished with the microscope from that of genuine kidney disease, but one that must be looked upon as physiological, since it disappears within a few days after the cessation of the exertion, leaving absolutely no signs of the disease. Mûller's observations were made on twelve bicyclists, eight of whom he calls trained and four untrained. Among the eight trained wheelmen there was only one whose urine contained albumin before the exercise, but after it the urine was albuminous in seven. In six of them, including the one whose urine was free from albumin, there were at the same time present in the urine casts in numbers as great as are generally met with in acute or chronic parenchy matous nephritis; and the two others had a few hyaline casts. Most of the casts were hyaline; the minority showed distinct renal epithelia and were granular. Free renal epithelia were found in every instance. White blood corpuscles appeared sparingly, but red corpuscles were not met with at all. Among the four untrained wheelmen, in all

of whom the urine was free from albumin before the exercise, two showed albuminuria and one cylindruria after riding from an hour and a half to three hours.—*N. Y. Med. Jour.*

AN ADVOCATE OF BLOOD LETTING.

Hoff (*Jour. Amer. Med. Assn.*) reports 26 cases in which, after other remedies proved unsuccessful, venesection restored the patients to life. The list included puerperal fever, eclampsia, paralysis from congestion of the brain, brain fever, meningitis and cerebro-spinal meningitis, pneumonitis in its first stages, congestion of the lungs, liver and abdominal viscera, peritonitis, croup, tonsillitis, hemorrhage of the lungs and incipient phthisis. "Repeated bleedings," says the writer, "will do more to cure consumption in its early stages than any other single agent, especially when used in conjunction with an open-air life and in a dry and medium high atmosphere." Hoff would have every medical student instructed in the art of venesection, so as to be ready to apply this much-neglected therapeutic measure in cases of acute congestion of the internal organs.—*Med. Prog.*

OBSTETRICS.

IN CHARGE OF

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Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

A NEW DRESSING FOR THE UMBILICAL CORD.

ROCHON strongly recommends the use of picric acid as a dressing for the cord. He states that it ensures antisepsis, obviates the too rapid desiccation which produces a brittle stump liable to cause hæmorrhage on the slightest provocation, does not hinder the separation of the cord on the sixth or seventh day, and leaves then a hard and complete cicatrix. It is furthermore absolutely harmless. The dressing consists merely of a bandage or a wad of absorbent wool soaked in 0.5 per cent. picric acid and then carefully squeezed out, and finally covered with aseptic cotton without the interposition of any impermeable material. The dressing should be changed every two or three days; more often if soiled with urine; at a pinch, however, a single dressing will suffice. The more often it is changed the later the separation of the cord, which is usually on the fifth to the seventh day when this method is followed.—*British Medical Journal.*

PRURITUS VULVÆ IN PREGNANCY.

FIEUX (*La Gynécologie*, February 15, 1898) advocates thorough local treatment of pruritus to be undertaken by the doctor himself. A woman under his care was tormented with pruritus which caused sleeplessness, loss of appetite and mental irritability. She did not consult anybody for a fortnight, but gave herself sublimate injections twice daily, and kept cold water compresses on the vulva. As she became worse she consulted Fieux. He found no objective symptoms beyond superficial scratches, nor were there any traces of discharge, oxyurides, or any other parasites. He declined to prescribe any lotion or ointment, but at once practiced Ruge's antiseptic toilet of the vulva. The vulva, vagina and cervix were thoroughly washed with soap, all folds and creases in the mucusa being opened up; then the vagina was freely washed out with a weak sublimate solution, some 16 pints being used. This process lasted a quarter of an hour, and definitely cured the patient. Ruge usually performs the "toilet" two or three times, and applies to the vulva after each sitting an ointment of carbolized vaseline. Fieux saw his patient six weeks after the treatment by washing, and the pruritus had not recurred. There may be a purely nervous pruritus, but the satisfactory effects of Ruge's treatment seem, in Fieux's opinion, to apply that, even in pregnancy where no objective local symptoms are present, the disease is often due to bacteria.

DIETING FOR DYSTOCIA FROM NARROW PELVIS.

PRADON dieted a woman who had twice been delivered by aid of the cranioclast of very big children (12 lbs., 11 lbs.); the pelvis was distinctly narrow, though only external measurements are given. The patient was kept for the last four months of her third pregnancy on a diet poor in carbohydrates, after Prochownik's principle. A somewhat thin fœtus weighing 8 lbs., 12 ozs., was delivered by forceps *British Medical Journal*.

HYPEREMESIS GRAVIDARUM AND SALT IN FOOD.

ANTONCHEVITCH (*La Gynécologie*, October 15, 1897) sees a strict homology between uncontrollable vomiting of pregnancy and vomiting from which animals suffer when deprived of salt in their food, being fed on albumen artificially deprived, as much as possible, of potassium and sodium salts. He has, therefore, dieted women suffering from hyperemesis gravidarum by taking care that their food contains at least a full proportion of salts.

TREATMENT OF RENAL AFFECTIONS DURING PREGNANCY.

O. PASTEAU AND J. D. D'HERBECOURT report the case of a patient four and a-half months pregnant, who suffered from purulent cystitis. She had suffered from leucorrhœa for six months. The region of the right kidney was full, dull, and very tender; pyelonephritis by direct infection from the bladder was diagnosed. Irrigation of the bladder was resorted to, with improvement of the bladder signs, but the temperature continued high. When a large quantity of urine was evacuated the temperature generally fell for a time. On one occasion artificial distention of the bladder was done for purposes of ureteroscopy, and, though the examination of the ureter could not be effected, it was observed that the temperature fell for several hours afterwards, so they determined, when the cystitis had subsided, to distend the bladder artificially at regular daily intervals for a few moments. This was done, with the result that the temperature remained normal, and the patient was confined naturally at eight and a-half months. The authors explain the results by supposing that the right ureter used to become temporarily blocked by pressure of the gravid uterus. Distention of the bladder raised the uterus and freed the ureter.—*British Medical Journal.*

APPARENT DEATH FROM POST-PARTUM HÆMORRHAGE.

GIMBERT, of Cannes (*Gaz. Hebdom*, February 27, 1898), records a case in which on his arrival at the bedside he found the child born and hæmorrhage going on; in a vessel there was a litre and a-half of blood, and the bed was soaked. The inert uterus reached to the umbilicus; the pulse could hardly be felt. It was 8:30 a.m. With one hand the aorta was compressed; with the other towels soaked in boiling water were rubbed on the abdomen; ergotin was injected, stimulants were given to drink. The uterus rapidly contracted, and the placenta was delivered, accompanied by a fresh gush of blood. But the loss of blood, estimated at 3 litres, was too much, and the patient sank, with all the signs of apparent death. Instantly the body and head seemed to shrink; the skin was cold as a corpse. No heart beats, pulse, respiration, nor reflex of any kind could be detected. Straightway the patient was placed across the bed, head low on the nurse's knees; direct insufflation of air from mouth to mouth with rhythmic traction of the tongue was practiced; hot applications were made to the chest. There was no effect at all. There was at hand a pan of filtered and boiled water holding 300 g.; into

this 3 g. of salt were thrown, and a syringeful (20 c.cm.) was injected into one thigh, while stimulation was continued. No result. It was 9.10 a.m. A similar injection was made into the other thigh. After a third injection (60 c.cm. in all) the patient made a little sound ; still the heart gave no sign. A fourth injection was made, after which a little fluttering was felt in the right radial artery ; some facial contractions and a conjunctival reflex appeared, and attempts at inspiration commenced. Very hot coffee, bouillon, and cognac were slowly given by the mouth ; the heart beats could be heard. the breathing became better, the skin warmer. It was a quarter to 10. At 11 a.m. resuscitation was assured. At 3 p.m. the patient could be left. The eventual recovery was satisfactory. The author, in commenting on the case, discusses the part played by the subcutaneous injection of serum, to which he attributes the resuscitation of the patient, for rhythmical traction of the tongue, insufflation of air, and stimulation of reflexes were unavailing until after the injections. He used this method rather than venous transfusion partly because more immediately applicable, partly because salt solution injected under the skin gets mixed with blood before it reaches the heart instead of arriving there as salt solution ; and partly because intravenous injection has too sudden an action, causing sometimes a dangerous reaction and even toxic symptoms.

WHEN MAY WOMEN WITH HEART DISEASE MARRY?

Kisch discusses this question. He does not agree with Peter's dictum : "*Fille pas de mariage, femme pas de grossesse, mère pas d'allaitement.*" Every case, however, must be decided on its merits. The chief points to be considered are : (1) the kind of heart disease, (2) its duration, (3) the presence or absence of compensation, (4) the general health, (5)the social position of the patient. (*a*) They may marry if the disease is not of long standing, and compensation is good, and the general health not undermined. They will have during pregnancy, and still more during and for a time after delivery, many troubles due to their heart, but in by far the greater number of cases there will be no danger to life. This applies to well compensated mitral regurgitation, and stenosis, aortic regurgitation, fairly marked sequelæ of pericarditis, and to muscular degeneration if not too far advanced. The patients must also be in a position to spare themselves bodily exertion as much as possible during pregnancy, to avoid mental excitement, and to have constant medical supervision. (*b*) The prognosis is not so good if the patients are very anæmic or nervous, or advanced in years, or if the

the valvular disease is congenital or acquired in childhood. In these cases the physician should advise against marriage, or at any rate point out that the disease will almost certainly become worse after marriage. (*c*) Marriage is to be absolutely forbidden as dangerous to life when compensation is failing or when there is advanced muscular degeneration. In all cases where there is dyspnœa, palpitation and a quickened pulse on slight exertion, or marked œdema not disappearing after rest in bed, when there is a tendency to arrhythmia, scanty urine with albumen, and attacks with irregular small pulse, coldness of the extremities, nausea, dyspnœa, syncope, etc., marriage is dangerous whether the cause of the symptoms be valvular disease, diseased arteries or cardiac muscles. Even those for whom marriage is allowable must follow certain rules strictly: (1) Coitus must not be frequent, and must be continued to the end of the orgasm, otherwise reflex heart troubles and depression result. (2) They must not have more than one or two children, as the strength of a diseased heart diminishes with every pregnancy in geometrical progression. If this rule is followed induction of premature labour will be luckily seldom necessary, since when it is the results are very unfavourable.—*British Medical Journal.*

LOCAL TREATMENT OF PUERPERAL FEVER.

Herrenschneider (*Centralbl. f. Gynäk*) strongly believes in the use of proper uterine therapeutics in puerperal fever. He has observed several fatal cases and found them distinctly traceable to a process of infective inflammation of the endometrium clearly local and manageable at first. He has successfully treated ten cases since these observations were made by intrauterine antiseptic injections, curetting, and, lastly, packing with iodoform gauze. The latter step is the most important, and should be continued after every injection until the temperature falls to normal. He combats the theory that scraping opens up blood vessels and lymph channels, allowing greater chance of the introduction of more septic material. Certainly vessels are wounded, but the tampon prevents the anticipated danger as it excites normal contraction of the uterine muscle, which tries to expel the foreign body. This therapeutical effect of the tampon is superior to the action of ergot administered with the view of expelling septic fragments and mucus from an otherwise empty uterus. The drug causes uniform contraction of the longitudinal and circular fibres when the uterine cavity is practically empty so that the os becomes closed. Thus the escape of poisonous mucus is prevented, not assisted. The tampon closes the raw surface of endometrium upon itself and keeps the os open.

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Editorial.

ANNUAL CONVOCATION, MEDICAL FACULTY, BISHOP'S COLLEGE.

This event was held on the 13th ult., and was a most successful function. Chancellor Heneker presided, and besides the Dean and members of Faculty with representatives from Dental College, there were present Principal Adams from Lennoxville, Hon. Dr. Borden, Minister of Militia; Judge Hall, Dr. Austin, Sherbrooke; Rev. G. Abbot Smith and others.

The Dean's report showed that there were 101 enregistered medical and dental students during the past session of which 88 came from the Province of Quebec, 8 from Jamaica, 2 from Ontario, 1 from Hayti, W. I., 1 from Australia, and 1 from the United States.

The following graduated C.M., M.D., viz. :—James Leslie Allan, Montreal; John Francis, Aux-Cayes, Hayti, W. I; Angus McDonald Ford, Portneuf, Que; Miss Minnie Gomery, Miss Marion Hansford, John McIntyre and Archibald Hamilton Newman, Montreal; Robert M. Stimpson, Manchester, Jamaica, W. I.; James Amos, Paddyfoot, Jamaica, W. I.

Dental Degrees (DD.S.) were conferred upon G. W. Oliver, T. D. McGregor and F. C. Nichol.

Prof. J. W. Stirling delivered the valedictory address to the medical graduates, and Dr. W. J. Kerr to the dental graduates.

Honorary degrees were then conferred upon :—

Hon. Dr. F. W. Borden, Ottawa.
Dr. F. J. Austin, Sherbrooke.
Dr. J. W. Stirling, Montreal.

The following is the list of prize winners :—

Junior Dessector, E. G. Mason.
Histology, F. O. Anderson.
Senior Dissectors, F. G. Henry, F. L. Wilkinson, equal.
David Silver Medal, F. O. Anderson.
Wood Gold Medal, Miss. M. Gomery.
Chancellor's Prize, John Francis.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

Considerable activity has been displayed by the Election Committee of Montreal Medico-Chirurgical Society in regard to the election of the new board in July next. It has received proxies from the majority of the English portion of the profession, and from the sympathy which is expressed with the reform movement it is expected that the entire English vote will support the Committee, and we learn that very satisfactory progress is being made among our French confreres in securing proxies and enlisting the sympathy of the profession in the effort being made to secure an independent board. While the present board is being attacked as a whole, it is only just to say that the movement is largely directed against Dr. Beausoleil, who occupies the objectionable position of having, through a systematic and organized effort, secured a sufficient number of proxies each time to entirely control the election in regard to himself and any other member outside of the University—representatives whom he desired to associate with him. These members, on account of this circumstance, owing their election to him, could not show independence of action in considering matters of importance coming before the board. It may truthfully be said, however, that it is generally recognized that there are a number of worthy men on the board who are

upright and capable, and whom we would like to see again elected, and who would not, we feel sure, sanction the questionable actions which have been accredited to some of the officials. It is to be hoped that, although the present registrar has opportunities for manipulating in his favour the proxies he has already in hand, that they will not be used by him in any way contrary to the wishes of those who have already committed themselves by having previously sent their proxies to him who may subsequently decide to have their vote otherwise controlled. It is well to remember that any member has the privilege of changing his proxy, and the last one registered will represent his legal vote. We publish below a circular issued by the Electoral Committee of the Medico-Chirurgical Society, which, considered side by side with that issued presumably by Dr. Beausoleil, is calculated to cause the Electorate to give the matter considered some thought. We will be glad to publish the views of any of our readers who may have something to offer in regard to the efforts now being made to place the elections to the College on an independent and representative basis.

ELECTORAL REFORM COMMITTEE.

A FEW REMARKS CONCERNING THE FORTHCOMING ELECTION OF THE PROVINCIAL BOARD AND CONCERNING A RECENTLY PUBLISHED CIRCULAR.

Never up to the present time has a Triennial Election of the Provincial Board caused so much interest in our profession as that which will take place in July next, and this because the administration of that Board is such that the profession can stand it no longer, and because the election will determine whether the profession is to be free to direct its business, or whether it is to continue at the mercy of a clique which, having once, through the apathy of the profession in times past, assumed control, now absolutely directs medical legislation and the administration of matters medical.

That clique has maintained complete control thus far as a consequence of the method of election now in vogue. Any one who has sufficient interest, direct or indirect, to procure the proxies of practitioners at any moment after the preceding triennial election, can use those proxies not only for his

own election but towards the election of the one and thirty other members of the Board ; and, inasmuch as this obtaining of proxies is largely employed, it is notorious that the election in no respects represents the free and individual voting of members of the profession.

We may be pardoned for calling attention to the facilties which proxy voting now places in the hands of the registrar. And we think it highly undesirable that the official on whom falls the delicate task of deciding the qualifying or disqualifying the voter should himself be one of the candidates for election.

A system which is far more creditable, and against which no objection can be raised, is that employed in connection with the elections to the general medical council in Great Britain, and employed also in the neighboring province of Ontario, that namely, in the first place, of nominating members for districts, and in the second place, after the nomination, distributing to the voters a ballot paper upon which are indicated the names of the candidate or candidates. This paper, duly filled in and signed, is then returned to the proper officials on or before a given date.

The agitation for this alteration in the method of representation is by no means new. Nine years ago, at the election for 1889, a Board of Governors was elected pledged to obtain this representation by districts; in 1892 the Board repeated this promise to the profession, and at the last election in 1895 the then Board once again placed this reform upon its programme. Once the elections have come and gone no regard has been paid to the promises thus made, and what is more, the Board, or those controlling the Board, have always rejected every motion brought forward asking for the fulfilment of these promises. Only this last December a small group of the members of the Board did not hesitate to employ every means possible to prevent the legislature at Quebec bringing in an amendment to the law which was in accordance with the desire of the profession. Now, only three months later, they again, for the fourth time in nine years, have the audacity to promise the desired reform, relying, no doubt, on their being able by some means or other to baulk us later.

It is the object of this committee to obtain the election of those pledged to bring in this system of district representation by ballot. If we succeed in electing a Board of Governors favourable to our object, that Board will immediately apply to the Government to so modify the present law as to give representation to each district—the districts to correspond as nearly as feasible with the parliamentary electoral

districts of the Province. The Committee does not venture to propound a list of candidates. It is our aim that each district shall nominate for itself a candidate pledged to support this reform.

The whole profession in this Province is in favor of the method of genuine representation by district. The mere fact that at each election the matter has been found a useful plank in the programme of the Board is in itself evidence that this is so, but, in addition, the medical societies of our larger centres, the district medical associations and the medical men in certain districts in assembly have all pronounced in favour of the reform, and these bodies have appointed committees to work in combination with others, in order to obtain professional independence in this matter of conducting the elections.

Naturally we find opposed to us that same clique which has constantly been in evidence whenever the general interests of the profession as opposed to this clique have been involved. We are far from wishing to identify the great majority of the members of the present Board with the clique. This small group, believing that possession is nine points of the law, and having control of the working of the College at the present time, have published a document without signature, but drawn up in such a manner as to appear as the official circular of the Board of Governors itself. We have been debating whether we should best serve the profession were we simply to publish and to circulate this circular in its entirety. It would have been difficult to concoct a more specious document than this. The authors do not hesitate to throw dust into the eyes of the profession in almost every sentence, and where a suggestion of the false is not adequate, they boldly employ a complete departure from the truth. The ordinary reader, unable to realise such wholesale lack of candour, will almost naturally accept a considerable portion of it as correct, not believing that any member of our profession could weave together such a tissue of deviations from the truth ; hence it becomes necessary to take up this circular point by point and show out its glaring defects.

Thus, analysing the circular, we find that it begins with a statement of the work accomplished by the Medical Board now in existence. We are told that the programme of this Board in 1895 was :

1. To amend the law relating to quacks and quackery.
2. To obtain the establishment of a Court of Dicipline.
3. To establish a Provincial Medical Library.
4. To establish a free Laboratory for clinical research.

In all these matters we are now told the Board has so acted as to merit the approval, not to say the thanks of the profession. We will, however, take up these points one by one:

The Illegal Practice of Medicine. During the last few years, those bringing to the notice of the College cases of quackery and of malpractice have received absolutely no help from that body; they have been given the cold comfort of learning that they themselves must be the prosecutors, and that even if the College should help them they must themselves be responsible for all charges. How keen the College has been to help the profession in this matter is evidenced by the fact that only now, when the term of office of the present body is coming to an end, has a feeble move forward been taken, and we are asked to be thankful for this small move, which allows the individual practitioner to bring his case before a magistrate or before some of the petty courts of the Province. But the College itself will give no more help in this matter than it did before. If called before the minor court and convicted, the penalty inflicted will be so small that it will not prevent the quack from exercising his lucrative calling. The Board has done nothing to render the law more effective in these matters, and we may well ask why it is that no steps have been taken in this direction. There is, indeed, not a little mystery concerning the way in which the Board allows American companies to give gratuitous consultation to facilitate the sale of their pretended specifics. The profession does not benefit by this; does any one?

2. *The Court of Discipline.* At last—this very year—the Board has determined to create a court of discipline, which has been demanded by the profession since 1889. Is this again an election movement? It is not a little interesting to observe how certain perpetual members of the Board now assume the credit for the creation of this court which to this moment has been energetically opposed by them. In itself a Court of Discipline is an excellent thing, but only under the conditions that it does not come into the hands of a group or of a clique, in which case it will become a most dangerous institution. Upon this matter the circular is silent. We are not told how the members of the court are to be appointed, and until we know this and know that the members of the court will be independent and not responsible to any clique, we cannot express any satisfaction,—in fact we must demand fuller knowledge about the matter.

3. *The Establishment of a Laboratory.* Here, again, we have the same obvious comment to make. That laboratory,

promised three years ago, is still non-existent save on paper. No steps have been taken until the last moment to do anything in connection with it, and now we know nothing as to how it is to be conducted. We are told that the apparatus is "on the way," and that this or that minister in France is giving odd bits of apparatus. How "odd" is indicated by the fact that here, in a laboratory purely clinical, there is to be included a collection of physical instruments. We suppose that this laboratory will be established in Montreal or Quebec. But already in the Montreal and Quebec universities and hospitals there are clinical laboratories, and, what is worthy of note, these laboratories are under the charge, not of some unknown foreigner, but of specialists of known attainments, and these laboratories can always be used by the practitioners. Why, therefore, expend the funds of the College in running a laboratory which will be scarcely of any use to others than those who already have laboratories which they can employ.

4. *The "Precious Beginning of a Library."* Whoever it was who drew up the sentences in the circular concerning the Provincial Medical Library must either be a "farceur" of high standing or one perfectly ignorant of medical literature. To judge from the statement therein made, a collection of a few hundred theses or papers written by students on the eve of graduation, forms an ideal nucleus for a circulating library. It is interesting to learn that these Paris theses form the "precious beginning" of the circulating library, which is to be available for the entertainment of the country practitioner. That library you will note was promised three years ago, and now, in 1898, it still consists of this donation of about 1,800 unassorted pamphlets. We are told that it is intended to order the leading text-books in medicine, surgery, gynæcology, etc., but the most that has been done so far has been to authorise the Library Committee "to purchase a copy of the best modern works" on these subjects; beyond this the Board has not gone; none of these works are in circulation, and the circulating library also exists only on paper.

Would it not be better, it may be asked, when the College is in its present poor financial condition, to use whatever funds there may be to spare so as to encourage the creation of district societies and to help them to acquire the leading medical journals.

Next the circular passes on to point out that from a purely administrative standpoint, the Board has done its duty "even better" than during the preceding term. We are told also that bulletins of its meetings are published and

distributed ; these bulletins are almost worthless, and are not distributed to the medical press until they are out of date. We are told that it has sent copies of the *Medical Register* to every licensed practitioner of this province. Now one virtue of a *Register* is that it should be correct and up to date, and this is neither. A large sum of money has been expended in bringing out a badly edited work of no value. It is full f errors.

We are told that it has ordered the collection of the arrears and annual dues, and, while the recent bulletins admit that these arrears are very considerable, we fail to find as yet anyone who has been of late applied to for his arrears, and we know that those who have written directly for information upon this point many weeks ago are still without any answer ; this indicates the activity with which the officials of the Board are attempting to collect these arrears. We are told again that the Board has established a scientific relationship with the University of Paris, which has decided to honour our brevet by a certificate of equivalence. But the Board deserves no credit for having obtained this, for such certificate of equivalence has been for long years accorded to Canadian students and medical men who are admitted into France to attend courses at the University and to take their degrees just as though they were French students or French medical men. As examples, we may name Dr. A. Brodeur, 1874, Dr. Lesperance, 1889, and Dr. DeMartigny, 1891. There have been several others also who have obtained this favour long before Dr. Beausoleil made his visit to Paris last year. Of these mentioned, Dr. Brodeur left Montreal in his third year of medical study, and had simply to pass the examinations of the second year, while the diploma he eventually obtained gave him the right to practice in France and in the French colonies.

Inter-provincial Licensing and Registration. This is a matter which has not been brought about by the Board of the Province of Quebec alone, but by the inter-action of all the provinces, and even, while we acknowledge that Dr. Beausoleil and those with him have borne their share, the majority of our provinces now favour inter-provincial registration ; it would be false in any way to suggest that Dr. Beausoleil originated the movement, while the non-election of himself and his clique would not disturb the negotiations which are still in progress.

A second part of the manifesto in question put forward, we suppose by Dr. Beausoleil (for as we say, the circular is unsigned and therefore unauthorative), is that we are promised the following :

1. *Abolition of the vote by proxy.*

2. *Representation by district* (this for the 4th time in 9 years).

3. *The establishment in each district of an agent to wage war upon quacks.*

4. *The appointment of assessors from each district.*

These promises, we would note, are made before the election. From our previous experience we would ask whether these have the least value. That experience tells us that, once the elections are over, the promises made are not merely forgotten, but any endeavour to exert their fulfilment is vigorously opposed by the officials of the Board, and we would ask if after these experiences the writers of the circular seriously expect the profession to continue indefinitely to be fooled by promises.

The third part of the manifesto deals exclusively with the relationship between the universities and the mass of practitioners, and it is urged that the opposition to the present method of conducting the College affairs is an attempt upon the part of the universities to control the whole College. This is a most impudent attempt to hoodwink the electors. The French and the English reform committees are both pledged to bring about representation by districts, and we would ask how any one can suppose that such an effort to bring about district representation is, at the same time, an effort to increase the influence of the universities upon the Board. A moment's consideration must show that district representation will inevitably increase the strength of what we might term the "country party" in the College as opposed to the university representation of Montreal and Quebec; and if this be the case it is evident that those members of the reform committees who are members of university staffs have higher aims than merely to satisfy personal spite or to revenge themselves for certain enactments of the Board of Governors, which might by some be conceived as being inimical to the welfare of the universities. And we would point out that it is not merely Laval University, but McGill and Bishops', whose professors are to be found in large numbers upon the Committees seeking for reform. The additional names of those who have requested to be included among the signers of our previous circular show how widespread is the desire for reform.

No one can read what is contained in this circular without seeing that what is there written is a matter of mean and personal spite against one university. Add to this, that we at the present time know of no single professor of a university who is a candidate for other than the University Seats

upon the Board, and of 42 Governors only 8 are elected by the universities. Altogether, what is the truth is that the universities and the ordinary practitioner are at one in this matter.

The following physicians requested that their names be added as members of the Election Committee of the Medico-Chirurgical Society :

Drs. H. Leroy Fuller, Sweetsburg ; Jas. Pritchard, North Wakefield ; F. Montizambert, Grosse Ile ; C. N. Stevenson, Coaticook ; W. Sutherland, Valleyfield ; D. K. Cowley, Granby ; J. O. Stuart, St. Anicet ; W. W. Alexander, Lachute ; W. H. Rowat, Athelstane ; R. A. D. King, Compton ; G. H. Christie, Lachute; L. F. Mackenzie, Bishop's Crossing ; H. J. Metcalf, Thurso ; J. R. Clouston, Huntingdon ; H. E. Mitchell, Bedford ; A. Dewar, Ottawa ; F. A. Cutter, Cowansville ; J. C. Phelan, Waterloo ; C. Marshall, Huntingdon ; D. F. Walker, Huntingdon ; A. F. Foss, Lennoxville ; A. D. Stewart, Richmond ; H. Stevenson, Wakefield ; T. McCurdy, Sawyerville ; M. H. Brophy, Quebec ; G. F. Shaw, St. Andrews, P. Q ; J. L. Hargrave, Danville ; Geo. Fisk, Montreal ; W. S. Morrow, Montreal ; John McBain, Montreal ; A. G. Nicholls, Montreal ; A. A. Robertson, Montreal ; J. P. Hanington, Montreal ; H. L. Reddy, Montreal ; H. D. Hamilton, Montreal ; E. A. Robertson, Montreal ; H. M. Church, Montreal ; J. C. Cameron, Montreal ; A. Schmidt, Montreal ; A. McPhail, Montreal ; W. H. Jamieson, Montreal ; Mary Fyfe, Montreal ; A. D. Patton, Caughnawaga ; A. E. Vipond, Montreal ; J. H. Laidley, Montreal ; G. A. Berwick, Montreal ; S. Ridley McKenzie, Montreal ; H. B. Yates, Montreal.

THE AMERICAN Electro therapeutic Association will hold its seventh annual meeting at Buffalo, September 13, 14 and 15, 1898, under the presidency of Dr. Charles R. Dickson, of Toronto. The titles of papers to be read at the meeting should be furnished to Dr. John Gerin, secretary, 68 North street, Auburn.

Book Reviews.

The Practice of Surgery.—A Treatise on Surgery for the use of Practitioners and students. By Henry R. Wharton, M. D., Demonstrator of Surgery in the University of Pennsylvania ; Surgeon to the Presbyterian and the Children's Hospitals ; Assistant-Surgeon to the Hospital of the University of Pennsylvania ; Consulting Surgeon to the Bryn Maur Hospital ; Fellow of the American Surgical Association and B. Farqu-

har Curtis, M. D., Professor of Clinical Surgery in the New York Post-Graduate Medical School and the Women's Medical School of the New York Infirmary; Surgeon to St. Luke's Hospital and the New York Cancer Hospital; Fellow of the American Surgical Association. Profusely illustrated. J. B. Lippincott Company, Philadelphia, 6 Henrietta street, Covent Garden, London, 1898. Dominion agent, Charles Roberts, 593A Cadieux st., Montreal.

The authors of this new work of Surgery have recognized the difficulties which present themselves in endeavoring to place in one compact volume, a fair presentation of the vast field covered by this subject. Nevertheless, the whole subject has been touched upon and the surgery of every portion of the body described in regard to symptoms of, pathology, and the different affections to which it is liable, and their diagnosis with a description of the various operations and other methods of treatment. This is all done in a little over twelve hundred pages of space, in clear, open print, and has freely interspersed in the text heavy-lettered headings, indicating the important sub-divisions of the subject under consideration. An important and useful feature of the work is the freedom with which the subjects treated of in the text are illustrated. There are nine hundred and twenty-three wood cuts and photogravures and a number of colored plates. For the student and practitioner this is a commendable addition and while it would appear to defeat the object of contracting the subject into a limited space, it rather economizes it, for a small illustrative cut will sometimes make plain what text occupying a much larger space would fail to do as well. A book issued in 1898, should represent fully all the most recent elements of progress; this is largely the character of this work, but here and there it is noticeable that to brevity is sacrificed sufficient detail to make the reader conversant with a full and lucid presentation of the subject. Thus in the surgery of the lymphatic system no mention is made of the varieties of lymphangitis indicated by the terms reticular and tubular, constituting two distinct affections and to the uninitiated the former variety would scarcely be diagnosed from the meagre description given here. Diagnosis and treatment are, however, fairly given, and in many places we notice points in treatment and methods which have quite recently been seen only in the periodicals such as the treatment of sprain, by a special form of early strapping as recommended by Gibney & Cotterell, a cut of the dressing applied also serves to make clear the method which some of the journal descriptions have failed to do.

Skiagraphs are inserted here and there illustrating important points; the aid given by the Roentgen ray and Fluoroscope in the diagnosis of fractures, the discovery of bullets, etc. is dwelt upon. The portion on minor surgery is very explicit and so fully illustrated that all the methods of bandaging, suturing and the application of ligatures, etc., can be readily acquired from the lucid descriptions and excellent cuts. Surgical bacteriolgy is treated of in a full and interesting chapter, giving the latest views on toxin infection, resistance offered by lesions, immunity, etc. There are altogether thirty-eight chapters which include not only such general

subjects as inflammation, septicaema, anæsthetics, plastic surgery, amputation, and the special surgery of various portions of the frame and organs, but giving also a good representation of that of such organs as the eye and ear, the air passages, venereal diseases, the urinary organs and the female genital organs. As a ready reference work for the general practitioner and a students' text-book, this up-to-date work is to be highly recommended.

The Year Book of Treatment for 1898.—A Critical Review for Practitioners of Medicine and Surgery. Crown octavo 488 pages. Cloth, $1.50. Philadelphia and New York. Lea Brothers & Co., 1898.

This compact and inexpensive résumé of the progress of therapeutics during the year, is now in the fourteenth year of its publication and has deservedly taken a strong hold on the attention of the members of the profession. The collaborators are all eminent physicians and specialists in Great Britain, and the book gives evidence of a very careful selection from journals and recent books of the chief progress made during the year in the various departments of medicine in regard to therapeutic measures. We notice that most of the excerpts and condensations are from publications during 1897, unlike some of the more pretentious annuals which we have noticed which draw largely from 1896. A year book should so arrange matters as to represent only the year previous to its issue. This convenient volume gives a full résumé of all real advances in therapeutic measures, as well as reference to recent light in etiology, pathology, etc. Even when a large annual is subscribed for, this is invaluable for reference, and no physician should be without an annual while this inexpensive and comprehensive retrospect is available.

Transactions of the College of Physicians and Surgeons of Philadelphia.—Third Series, Volume Nineteenth. Edited by Thompson S. Wescott, M.D., Philadelphia.

This volume is neatly bound in cloth with gilt top and contains two hundred and fifty-one pages of matter. There are twenty-two papers published together with several biographical sketches, the annual address of the President, lists of officers and members, etc. Among the interesting papers are the following :— Rapidly occurring semphlygia or acute lead poisoning, by J. M. Dacosta, M.D., LL.D. Some important facts about chloroform, by H. A. Hare, M. D. The value of ausculatory Percussion in Diagnosis, by Alfred Stengel, M. D. A contribution to the study of the action of the venom of the Crotalus Adamanteus upon the blood, by S. Weir Mitchell, M.D., and Alonzo H. Stewart, M. D. The Hysterical Newroses of the Skin, by Arthur van Harlingen, M.D.

Diseases of Women.—A text book for students and practitioners by T. O. Webster, B.A., M.D., Edin., F.R.C.P., Edin.; Demonstrator of Gynæcology McGill University ; Assistant Gynæcologist Royal Victoria Hospital, Montreal ; Fellow of

the Royal Society of Edinburg; Corresponding Member of the Royal Academy of Medicine of Palermo, Italy, and of the Italian Obstetrical and Gnæcological Society; late senior assistant to the Professor of Midwifery and Diseases of Women in the University of Edinburg. Illustrated with 241 Figures. Edinburg and London. Young J. Pentland, Montreal; Wm. Drysdale & Co., 1898. Price $3.50.

The author has endeavored to give prominence to the scientific basis of each subject under consideration and has included the chief facts gathered from modern researches in anatomy, histology, comparative anatomy and pathology. He has avoided the fault sometimes made of regarding woman as a gynæcological being, but on the contrary has studied clinical features in their widest relationships. Neither has he advocated any therapeutic measures which have not been thoroughly tested. Taken altogether the style of the work is so clear and the treatment of the various subjects so terse and yet so thorough that the duty of reviewing it has been made a pleasure. Canadian authors of text books have so far been very few; but Canada may well be proud of the one sent forth by this talented son of hers. We cannot, of course, refer to the many points of excellence, where the whole work is excellent, but we can safely say that no work that has been published either in Europe or America is better suited to the wants of the Canadian medical student than this one. We, therefore, bespeak for it a ready sale feeling quite sure that it will be heartily welcomed by all who read it as one of the best works of its size and class that has ever appeared.

Elements of Latin for Students of Medicine and Pharmacy. By GEORGE D. CROTHERS, A.M., M.D., Teacher of Latin and Greek in the St. Joseph (Mo.) High School; formerly Professor of Latin and Greek in the University of Omaha; and HIRAM H. BICE, A.M., Instructor in Latin and Greek in the Boys' High School of New York City. 5¼x7½ inches. Pages xii-242. Flexible Cloth, $1.25 net. The F. A. Davis Co., publishers, 1914-16 Cherry St., Philadelphia; 117 W. Forty-Second St., New York City; 9 Lakeside Building, 218-220 S. Clark St., Chicago, Ill.

This book is not intended for those who wish to begin the study of the Latin language, but for those who wish to apply their knowledge of it however slight it may be towards the application of it in medicine and pharmacy. It has, however, the declensions and conjugations as in an ordinary Latin text book, only substituting almost exclusively those words which are of use to students of medicine and pharmacy, such as names of drugs, diseases and the parts of the body.

It is designed to present within the briefest possible compass those principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine.

There is a very good chapter on prescription writing which also contains a list of abbrevations which ought to be avoided, and another on suggestive tables on the Greek element in medicine.

It ends up with a comprehensive alphabetical list of anatomical proper names, giving their origin.

It would be an excellent thing if those intending to follow up either of these branches could have such a book as this in the curriculum of their school or college course.

Accident and Injury: Their Relation to Diseases of the Nervous System.—By Pearce Bailey, M. D., New York. D. Appleton & Co., 1898, pp. 430. The object of the author has been to write in one volume information at present only existing in scattered monographs, most of which are in foreign languages. The traumatic neuroses are very fully dealt with, and all relating to the part played by injury in causing chronic degenerative nervous disorders is very fully discussed. The book is well illustrated by original diagrams and photographs, and seems worthy of a permanent place in medical literature. It will prove of special value to those needing information upon the medico-legal aspects of injury to the nervous system.

Saunders Medical Hand Atlases.—Methods of Clinical Diagnosis. By Christfield Jakob. Edited by A. A. Eshner. Phila., 1898. W. B. Saunders. The popularity of the well-known series of Lehmann's Hand-Atlanter has led Mr. Saunders to publish an authorized American Edition, in which we notice that the shod plates bear the stamp of F. Reichbold, Munich. The translating is well done, and the excellence of both text and illustrations should ensure a well-earned popularity on this side of the Atlantic. Suggestions might be made in case of subsequent editions. For instance, it would be well to indicate the magnification in drawings of microscopic objects.—In plate 14 we notice that crystals of calcium oxalate are made to appear fully as large as those of triple phosphates. A colored plate, blue, depicting the action of an acid upon red litmus paper, is perhaps not very urgently called for. The only method suggested for performing the serum test for typhoid is to "introduce the serum from about 2 c.c. of blood obtained from the finger, under antiseptic precautions, into a narrow test tube, containing sterilized bouillon, which is then inoculated with living typhoid bacilli, and kept at the temperature of the body." We doubt if any human being now follows this technique. The type and get up of the book are both excellent.

IN PRESS FOR EARLY PUBLICATION.

Messrs. Lea Brothers & Co. announce the following books:

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The Principles of Treatment. By J. Mitchell Bruce, M.D., F.R.C.P., Physician and Lecturer on Materia Medica and Therapeutics at Charing-Cross Hospital, London. In one octavo volume.

Diseases of the Nose, Throat, Naso-Pharynx and Trachea: A Manual for Students and Practitioners. By Cornelius G. Coakley, M.D., Professor of Laryngology in University Medical College, New York. In one volume, 12mo., of about 400 pages, with numerous illustrations, many of which are in colors.

Diseases of Women: A Manual of Non-surgical Gynecology, designed especially for the use of Students and General Practitioners. By Francis H. Davenport, M.D., Instructor in Gynecology in the Medical Department of Harvard University, Boston. Third edition, thoroughly revised and enlarged, with many additional illustrations.

A Treatise on Gynecology. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Chicago Medical College, Chicago. In one octavo volume of about 600 pages, with 425 illustrations, many of which are in colors.

A Text-Book of Anatomy. By American Authors. Edited by Frederic Henry Gerrisn, M.D., Professor of Anatomy in the Medical School of Maine. In one handsome imperial octavo volume, copiously illustrated in colors.

Manual of Skin Diseases. With Special Reference to Diagnosis and Treatment. For the Use of Students and General Practitioners. By W. A. Hardaway, M.D., Professor of Skin Diseases in the Missouri Medical College. Second edition entirely rewritten and much enlarged. In one handsome 12mo. volume with illustrations.

The Principles and Practice of Obstetrics. By American Authors. Edited by Charles Jewett, M.D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn, N.Y. In one handsome octavo volume, with many illustrations in black and in colors.

CANADA
MEDICAL RECORD

MAY, 1898.

Original Communications.

PREGNANCY FOLLOWING VENTROFIXATION WITH IMPROVEMENTS IN TECHNIQUE.

AUTHOR'S ABSTRACT OF PAPER READ BEFORE AMERICAN GYNÆCOLOGICAL SOCIETY AT BOSTON, MAY 24, 1898.

By A. LAPTHORN SMITH, M.D., M.R.C.S., Eng.

Fellow of the American Gynæcological Society; Professor of Clinical Gynæcology Bishop's University, Montreal; Gynæcologist to the Montreal Dispensary; Surgeon in Chief of the Samaritan Hospital for Women; Surgeon to the Western General Hospital.

The following conclusions were based upon about 2,500 cases by 41 operators, including 111 cases of his own, reported in reply to a circular letter of inquiry.

1st. That as far as curing retrodisplacements is concerned, whether retroflexion, retroversion, anteflexion with retroversion, and also prolapse of the uterus, ventrofixation with two buried silk stitches passing through peritoneum and fascia gives the most reliable results. Failures are unknown when the operation is performed in this way.

2nd. Ventrofixation should be reserved for cases in which abdominal section is necessary for other reasons, such as detaching of adhesions and the removal of the diseased tubes which caused the adhesions. When it is expected that pregnancy may follow, some other operation should be chosen, because

3rd. Although pregnancy only followed in 148 cases out of about 2,500, still, in 30 per cent. of these, or 36, there was pain, miscarriage or difficult labor, requiring obstetrical operations.

4th. When suspensio uteri was performed, that is the uterus attached to the peritoneum, only a few relapses occurred; but, on the other hand, the patients were free from pain during pregnancy and the labors were less tedious neither did they require to resort to serious obstetrical operations. The uterus should therefore be suspended rather than fixed to the abdominal wall in all cases in which any part of the ovary is allowed to remain.

5th. A third method, it is claimed by some,—namely, the intra-abdominal shortening of the round ligaments—is preferable to either ventrofixation or suspensio uteri. This may be done either by drawing a loop of the round ligament into the loop which ties off the ovary and tube: or in cases in which the latter are not removed, simply to detach them from adhesions and shorten the round ligament by drawing up a loop of it and stitching it to itself for a space of about two inches. By this means the round ligament develops as pregnancy advances, and the dragging and pain and other more serious accidents which are present in 30 per cent. of the cases of ventrofixation are certainly avoided.

6th. If the uterus is attached to the abdominal wall, the stitches should be kept on the anterior surface, but near the top of the fundus; the complications were more frequent when there was too much anteversion than was the case when the anterior surface of the fundus was attached to the abdominal wall.

7th. As large a surface as possible should be made to adhere, by scarifying both the anterior surface of the fundus and the corresponding surface of the abdominal peritoneum, in which case one buried silk suture will be sufficient to keep the uterus in good position.

8th. Several of my correspondents mentioned incidentally that they knew of many cases of pregnancy after Alexander's operation, and that in no case was the pregnancy or labor unfavorably influenced by it. Alexander's operation should therefore be preferred whenever the uterus and appendages are free from adhesions.

9th. The results of Alexander's operation are so good that even when there are adhesions it might be well to adopt the procedure of freeing the adhesions by a very small

median incision and then shortening the round ligaments by Alexander's method ; after which the abdomen should be closed. This could be done without adding more than ½ of 1 per cent. to the mortality, which in Alexander's operation is nil.

CLINICAL LECTURE ON BILATERAL ABDUCTOR LARYNGEAL PARALYSIS.

Delivered to the students attending clinic at Throat and Nose Department, Western Hospital, Montreal

By GEO. T. ROSS, M D.

Fellow American Laryngological Association; Prof. Laryngology Bishop's College ; Laryngologist Western Hospital, etc.

GENTLEMEN :—The nervous system is almost entirely inaccessible to direct observation, with trifling exceptions ; the state of this system, therefore, can be ascertained only by the manner in which its work is done, and morbid states in the system reveal their presence by the derangement of function which they cause. The larynx is no exception to this fact, and disordered function here is our only guide to diagnosis. Remember in examining the larynx that only a few unimportant affections of this organ are independent of systemic disease or of disease in contiguous organs. Since then the interpretation of doubtful cases will always depend largely upon examination of neighboring parts of the air passages, especially the fauces, the alimentary canal, and even the entire body, it is wise in the absence of very large experience to make a careful general examination in order to check even such local findings as seem to be perfectly clear and easy to explain, for not infrequently a preconceived opinion concerning the primary cause of the disease is in this way shown to be erroneous. Your examination cannot be too thorough ; in no other organ of the body is disease so dependent on the general condition as in the larynx, and conversely, the finding of certain conditions in the larynx often throws light on latent or obscure processes in the entire organism. The importance of these remarks is well illustrated by the case we have before us for study to-day. This patient, a married man, aged 50, gives the following history :— he complained of hoarseness about beginning of the year 1897, and says it has con-

tinued more or less since that time. His attention was specially directed to the state of his throat in March last year, when on taking a drink of cold water he experienced a choking spasm which he says almost suffocated him, and this spasm has always been repeated whenever he attempted since that time to swallow cold fluids. At times he complains of distress from gas in stomach and bowels, and that "rumbling and roaring" in these organs makes him miserable occasionally. He continued his work of cab-driving until beginning of Feby. last, when the difficulty of breathing was such as to compel him to quit. At night his noisy inspirations were such that his wife feared he would suffocate. Every morning a fit of coughing would dislodge a quantity of thick mucus, after which he had some relief. He had been under the care of several physicians, but the throat trouble becoming so pronounced he was referred to this clinic. Eight years ago he had gonorrhœa for three months, but never was confined to the house sick until three years ago when he had an attack of what was called rheumatism. His left leg became weak and painful, causing lameness for over 8 months. The pain was not spasmodic or of the character of "lightning pains," but simply caused by the effort of walking, and getting on and off his cab was difficult. Says his right leg was always quite strong and is unaffected to-day. The left leg improved and he returned to work, but it continued perceptibly weaker than the right. For the past 23 years he took liquor freely. Thinks he averaged 3 or 4 quart bottles of beer daily.

On examination the calf of left leg measures 5-8 inch smaller than right, and at middle of thigh the left is 1 1-2 inches smaller than the right. Left patellar reflex is exaggerated. Right patellar reflex is normal. The cremaster and abdominal reflexes are normal. No local or general areas of disturbed sensation except in the left leg and foot, which patient says is always cold. Eyes act normally to light, but pupil of left eye is smaller than right eye. No Argyll-Robertson pupil. On speaking there is at times a decided stammer and effort to proceed; the voice will break occasionally and take a high falsetto note. On walking there is a slight want of co-ordination in left leg. His arms in respect to co-ordination are

normal. On the patient closing his eyes he can't maintain his equilibrium or walk without staggering. Examination of the other organs and systems of his body, excepting the larynx, gives negative results. The laryngeal examination shows a catarrhal laryngitis. Epiglottis normal in color and size. Ventricular bands are hyperæmic overlapping the vocal cords partially. The breadth of vocal cords in sight is not more than 2 m. m., and their margins are thickened and reddish. Glairy mucus covers the aryepiglottic folds and fills the pyriform sinuses. The true cords are permanently adducted so that only a very narrow chink allows entrance of air. The inspiratory effort instead of causing abduction forces the cords closer together by the resulting suction, and in consequence much noisy stridor is produced, while the expiratory effort mechanically forces the cords apart. This noise is much increased on patient falling asleep, so that the necessity for intubation or tracheotomy has been threatening for a time. This tonic spasm of the cords is permanent, although less severe in waking hours. The head is occasionally tossed back to assist inspiration, but the patient seemed to get enough oxygen because cyanosis has not appeared. Temperature and pulse are normal.

In all cases of disease in which there is an organic lesion of the nervous system, the object of the physician is not merely to give a name to the disease, but to make an exact anatomical and pathological diagnosis. Both the anatomical and pathological diagnoses are of importance, not merely from a scientific point of view, but for the practical purposes of prognosis and treatment. The object of the anatomical diagnosis is to determine the exact part of the nervous apparatus which is directly implicated by the lesion. In spite of the attention which has been paid to the functions of the larynx by means of physiological experiments, and clinical and pathological observations, knowledge of the innervation of this apparatus is still imperfect. To help understand the curious and fascinating phenomenon with which we have to deal, I first would remind you that the motor nerve *par excellence* of the larynx is the recurrent laryngeal nerve. With the only exception of the tensor of the vocal cords, the crico-thyroid muscle (this

being supplied by the external branch of the superior laryngeal), the recurrent laryngeal innervates all the laryngeal muscles proper, that is the antagonistic groups of the abductor and adductor muscles of the vocal cords. The former (*abductors*) are represented by the *posterior crico-arytenoid muscles* only, the latter (*adductors*) by the *lateral crico-arytenoid*, the *external and internal thyro-arytenoid* and the *inter-arytenoid muscles*. The statement of several German authorities that the superior laryngeal nerve takes part in motor innervation of all the laryngeal muscles proper has been strongly opposed by late observers. The ultimate derivation of the recurrent laryngeal nerve is, however, warmly contested. Many anatomists and physiologists considered the spinal accessory nerve the source of laryngeal innervation, but recently, Grossman, Spencer and others, by experiments, held that the true source of this impulse was the lower bundle of vagus roots. The question is not definitely settled. Dr. R. Russell has split up the recurrent laryngeal nerve throughout its peripheral length into three different bundles of fibres, one of which supplies the abductors and another the adductors, whilst from the third, no motor effect can be produced in the larynx. We, therefore, know now definitely that the fibres going to the antagonistic groups of laryngeal muscles are differentiated throughout their peripheral course. These fibres ultimately supplying the abductor of the cords are situated on the inner side of the recurrent laryngeal nerve. I now show you a plate illustrating, first, what is beyond question the ordinary respiratory position of the vocal cords, and 2nd, what is the cadaveric position of them. The question arises, what is the greater width of the glottis in life due to? The reply is, the abductor muscles of the cords are endowed with a special reflex tonus, by means of which the glottis during life is kept open during both phases of respiration to such a degree that that type of respiration which we call "ordinary" is rendered possible. In this degree of respiration, we breathe by the aid of diaphragm and intercostal muscles only. As soon as during life the glottis is narrowed to the same degree as we see it after death, we find that with every unusual muscular exertion dyspnœa begins, shown by very quick and shallow or by very deep and labored inspiration,

accompanied by audible inspiratory stridor. At the same time, whilst the action of the diaphragm and intercostals becomes intensified, the accessory muscles of respiration come into play. The reason is simple. The laryngeal tube is the narrowest part of the whole respiratory apparatus, and this tube is still further narrowed by the insertion of the vocal cords into its calibre. Semon has shown that this arrangement has narrowed the space for entry of air to less than 1-3 its natural area. The result of this narrowing would be that if it were not counterbalanced by some compensation of nature, no sufficient space would exist for the entrance of air when any extra demand was made upon the breathing powers. To obviate this, nature has endowed the abductor muscles with the tonus referred to, by means of which the glottis is kept sufficiently open for ordinary breathing. This tonus is produced by certain centripetal fibres, contained mainly, but not exclusively, in the pneumogastric nerve, which are stimulated by the interchange of gases in the lungs during respiration and act rhythmically upon certain centres in the medulla oblongata, where they are changed into tonic impulses, which again descend along the fibres which ultimately form the recurrent laryngeal nerve and keep the glottis open to a degree sufficient for ordinary respiration. A knowledge of these facts is essential to understanding the pathological phenomenon of the case we are studying. If you cut any motor nerve which supplies various muscles horizontally across, all these muscles become completely paralyzed, unless innervated at the same time by other nerves. But should the lesion be slow instead of sudden, one of two things may occur, viz: either all the nerve fibres contained in that nerve may suffer together and in equal degree, and a stage of paresis instead of complete paralysis be first seen, or the cause may act in an unequal degree upon the nerve fibres contained in the nerve trunk, when the paralytic changes may be more pronounced in one set of muscles supplied by that nerve than in another. Authorities have shown that whilst the abductors were the first to succumb to disease, the adductors were the first to recover, and in fact the abductors may remain permanently damaged after complete recovery of the adductors. The ultimate cause of this greater

liability to attack of the abductors is still unknown. The following facts are clinically important: First, the motor nerves of the larnyx have so long and tortuous a course, that from their medullary origin to their endings in the laryngeal muscles they are exposed to an enormous number of various pathological influences. Second, the laryngeal abductor paralysis caused by any of these influences may and in a good many cases does remain for a long time the only positive sign of these various pathological processes. Third, this paralysis, if unilateral, may in no way proclaim its existence but must be sought for, if one does not wish to miss the opportunity of making an early diagnosis in many of these cases.

Undoubtedly a number of cases of abductor paralysis occur in which it is a silent storm signal of impending grave trouble, while it may again be present for many years without other symptoms developing. In the latter cases some trivial local lesion, such as an enlarged gland compressing the motor laryngeal nerves at any point in their long course, may induce persistent abductor paralysis owing to the greater vulnerability of the abductor fibres. Thus it would be unwise to frighten a patient by suggesting possibilities of serious trouble; at the same time it is necessary to watch the course of such trouble and carefully follow it, for the reasons stated. In the case we have before us, symptoms of tabes dorsalis are by no means typical, the patellar reflexes being unimpaired and no history of lightning or girdle pains, but the other signs are such as to leave the diagnosis sufficiently positive at this stage of the disease. If the gastric and laryngeal crises had not asserted themselves so positively as well as the laryngeal inco-ordination, and had the paralysis alone existed, then the question of alcoholism might have reasonably been considered, but with the foregoing history we may look for developments of a more pronounced tabetic nature later on. The patient remained two weeks in the Hospital on full diet, sedatives, tonics and complete rest with electricity to larnyx, when he gained in every way. The glottic chink widened sufficiently to afford fairly comfortable breathing, and this is now only slightly stridulous. His sleep is not much disturbed, and he has been

allowed to go home where he can continue treatment. The differential diagnosis between alcoholic neuritis with paralysis and tabes dorsalis I will leave to the professor of neurology, in whose domain this work lies. We will keep up Galvanism and Faradism and such constitutional restoratives and symptomatic treatment as the case indicates from time to time and report upon it later.

Selected Articles.

CHEYNE-STOKES RESPIRATION.*

By N. S. DAVIS, Jun, M.D., Chicago, Ill.

Mr. ——, merchant, 73 years old, of good habits and good family history, came under my care in September last. His health had not been robust for many months. In midsummer his legs became edematous and he then first consulted a physician. He was found to have dilatation of the heart, a slight aortic murmur, atheroma to a moderate extent of the peripheral arteries and interstitial nephritis. His symptoms underwent no material change up to September, when I first saw him. As time went on he grew feebler, thinner and mentally depressed. He had little appetite for food or drink. He was often sleepless. About the middle of October he was too feeble to walk, and rarely slept more than an hour at a time. At night he was tormented by hallucinations which were v ry persistent. At this time Cheyne-Stokes respiration first manifested itself. The rhythmically increasing and diminishing respiratory movements with short pauses were very noticeable. The periods of apnea were short and the periods of dyspnea were not severe. The pulse was quite regular and was kept at about eighty-five by strophanthus. The pupils showed no change in size and there was no hebetude during apnea.

Cheyne-Stokes respiration was not constant at this time. It lasted for several days, and disappeared only to reappear from time to time for a few hours or days. Occasionally apnea was almost wanting, and even at the height of dyspnea the respiratory movements were not labored.

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In November he improved; respiration became normal, sleeplessness was less troublesome and hallucinations were more infrequent and less persistent. Early in December he grew worse. Cheyne-Stokes respiration reappeared in an aggravated form and persisted for almost a month until he died. Dyspnea was more intense than during the first attack of Cheyne-Stokes respiration and the pauses were longer. His pulse quickened during apnea, and as respiratory movements grew shallower his eyes converged slightly, his lids closed and he seemed to be in deep sleep. If at this time his lids were lifted the pupils were uniformly found to be closely contracted. Conversation with him was slow, for he would cease speaking and apparently become unconscious during the period of apnea. With the first few shallow breaths his lids would open and his eyes would roll slightly as they are apt to do when one is suddenly roused from deep sleep. He would, so soon as respiration was fairly established, resume a conversation without interruption of argument or break in the continuity of events that he might be describing. During apnea the power of speech was lost and mentality seemed suspended. If spoken to when thus apparently dozing he was not conscious of the question. Conversation with him was tedious, for these pauses occurred once in every eighty to ninety seconds, and lasted about twenty-five seconds. The dyspnea was very wearisome to him. He was never cyanotic.

I have described this case as it illustrates Cheyne-Stokes respiration in its mildest form, and in that form in which all the accompanying rhythmic phenomena of pulse, eye and mind are present. In 1818, Cheyne (*Dublin Hosp. Rep.*, 1818, vol. ii.) first called attention to rhythmically ascending and descending periods of respiration, separated from one another by short pauses.

Cheyne-Stokes respiration should be clearly distinguished from irregular breathing accompanied by pauses. In the latter form of respiration pauses occur, followed by several long, gasping breaths which may gradually grow less violent and rapid or irregularly become so and cease with the beginning of another pause. Cheyne-Stokes respiration is characterized by a pause of from ten to forty seconds, followed by from ten to twenty respirations, which grow gradually quicker and deeper until they are dyspneic in character, both because of their violence and rapidity. During the succeeding ten to twenty respirations the movements grow progressively less violent and rapid until they cease and apnea begins. Usually the ascending and descending series of movements number about the same,

but they are not always equal. The descending series are often less regular than the ascending. In the mildest cases apnea may be wanting, the ascending series of respirations may follow the descending without interruption. If, during the respiratory pause, voluntary efforts are made to breathe, the whole chest is lifted by the unusual muscles of respiration, but the diaphragm and intercostals do not move.

Cyanosis is rarely observable, although the pauses are frequent and many of the respiratory movements are shallow. Patients often complain of the wearisomeness of respiration, but not of hunger for air. In 1859, Reid (*Dublin Hosp. Gaz.*, vi., 308) pointed out the commonly observable changes which occur in the pulse during Cheyne-Stokes breathing.

In most cases during apnea the pulse rate is quicker than during dyspnea; it will beat once or twice oftener in the quarter minute. Not infrequently the pulse is paradoxical. It is apt to be large and soft during dyspnea and small during the respiratory pause. Biot uniformly observed less arterial tension during apnea than dyspnea (*Rev. Mensuelle de Med. et Chir.*, 1878, ii., 975.) While these are the usual changes in the pulse, if any occur, it has been found in rarer instances to be slow during apnea instead of quick, and once Hesky (see Gibson, *Edin. Med. Jour.*, xxxiv.) observed almost a complete disappearance of pulse beating during each respiratory pause.

In 1866, Leyden (*Arch. f. Path., Anat. und Phys., und f. Klin. Med.*, xxxvi.) first called attention to the rhythmic changes that occur in the pupils during the phases of Cheyne-Stokes repiration. In very many cases, though by no means in all, the pupils become closely contracted during the pause and do not respond to the stimulus of light, although during dyspnea they are normal in size and respond readily to light. Contraction of the pupils usually takes place slowly and progressively, but in a few instances it has been observed to occur in slight successive spasms. Biot thinks these changes are due to variations in blood pressure, which are so often noticeable in the different phases of Cheyne-Stokes respiration. Recent observations, however, make it probable that they are not to be explained in this way, but are due to the direct influence of the nervous system upon the eye. Often, just as the pupils begin to contract, a slight convergence of the eyeballs occurs, and still oftener the lids close during the period of apnea and the patient appears to be in deep sleep.

Not only do rhythmic changes occur in respiration, pulse and pupils, but in a proportion of cases, as in the one that I have just described, mental processes seem to be suspended during apnea, although so soon as respiratory move-

ments begin the mind awakes and seems normally clear. In many cases of Cheyne-Stokes respiration patients are deeply comatose and no mental variations are observable. Even in these cases, however, the pulse and eye phenomena are often seen.

In 1876, Ross (*Canada Med. and Surg. Journal*, v., 544) described a case in which general muscular rigidity occurred during each respiratory pause. Several similar cases have been described since. This is, however, not a frequent concomitant of Cheyne-Stokes respiration, and cannot be regarded as one of the phenomena usually accompanying it.

In individual cases we find various combinations of these modifications of pulse, pupil and mental state. They by no means all occur coincidentally. The pulse and respiratory changes are the commonest, and next in frequency the eye and respiratory changes. Gibson (*Edin. Med. Jour.*, xxxiv.) has described one case, which is interesting and important, as it throws light upon the nature of these phenomena. It was a case of meningitis, in which at regular intervals there occurred contraction and dilatation of the pupils, and coincident periods of somnolence and waking, but respiration remained normal. This case cannot be called one of Cheyne-Stokes respiration, but it illustrates the fact that certain portions of the brain may be involved and produce certain of the rhythmic changes characteristic of Cheyne-Stokes phenomena, although the medulla is not affected. The reverse of this condition, which produces Cheyne-Stokes respiration, is much the commonest.

The phenomena of periodic respiration are very variable in their duration, sometimes lasting only a few minutes or hours, at other times persisting for many days or even for many weeks. An anonymous contributor to the *Lancet* (1890, i., 776) says that his father, who is advanced in years, has exhibited characteristic Cheyne-Stokes phenomena continuously for many years, although otherwise apparently well.

The dyspnea varies greatly in severity. For instance, in one case which was under my care this winter, the respiratory movements were so moderate that they caused the patient little annoyance, and he scarcely ever complained of difficult breathing. Usually, however, it is sufficiently severe to weary the patients very much, and every now and again it is intense. When respiration is wearisome and difficult it seems to demand relief by treatment. Text-books upon therapeutics and upon medicine give practically no information as to the mode of action or the utility of drugs for the relief of these peculiar symptoms. As one case after another came under treatment, I tried successively the nitrites and

soporifics, thinking that they might relieve the dyspnea, as they so often do that of asthma, but I soon found that their effects were uncertain, that apparently they afford relief in one case and none in another. I then tried respiratory stimulants and oxygen inhalations, but with similar results. As during the last year there came under my observation in quick succession a series of these cases, I was prompted to review the literature of the subject with care, hoping tha It might there find more information in regard to the nature of the phenomena and its mode of treatment than is to be obtained from our usual books of reference. I have found the literature of the subject very large, but unfortunately it contains almost no exact information of a therapeutic character. It is chiefly controversial in regard to the nature of Cheyne-Stokes phenomena.

When we approach the treatment of this affection we naturally ask ourselves: Under what conditions does it arise and what is its nature? Cheyne-Stokes respiration has been observed as a complication of the most varied maladies, and has been provoked experimentally in very many ways. Edes (*Boston Medical and Surgical Journal*, 1879, ci., 734) and Cheyne have both pointed to certain families in whom there was apparently an inherited tendency to this peculiar form of respiration. It is rarely associated with such infectious diseases as typhoid fever, small-pox, diphtheria, cholera and whooping-cough. It occurs much more frequently in cerebral affections, such as meningitis, apoplexy, cerebral embolism and thrombosis, sunstroke, insanity, hysteria, hæmorrhage into the cerebellum and medulla, or aneurism in the latter. Complicating hemophilia, hæmorrhage after operations and deep anæmia from other causes has been observed. It is frequently associated with certain circulatory affections, oftenest with fatty degeneration of the heart, valvular disease, pericarditis, aortic aneurism and general arterial atheroma. At times, it also complicates respiratory affections, such as bronchitis, pneumonia and tubercular disease of the lungs. It has been observed as a sequel to tracheotomy. In these affections, however, unconsciousness or semi-unconsciousness exists before Cheyne-Stokes respiration develops. It is also rarely observable in severe catarrhal affections of the gastro-intestinal tract. It occurs oftenest of all associated with chronic renal disorders, when it is usually regarded as a manifestation of uræmia. It has been observed in healthy individuals who were sleeping deeply from the effect of prolonged or excessive exertion. It has also been seen when narcosis produced by morphin, chloral and the bromids was deep. In some animals it seems to be the

normal mode of respiration during hibernation. It has been produced experimentally in frogs by subjecting them to very considerable changes of temperature, or by holding them under water for an unusually long time. It has been provoked by bleeding and by the complete removal of the heart. In higher animals it has been caused by alternate compression and relaxation of carotid and vertebral arteries; by section of the medulla with or without section of the vagi; by pressure upon the medulla; and by various injuries to the brain and the medulla. It has been produced quite uniformly by section of the latter at the level of the alæ cinereæ. Of all these conditions under which Cheyne-Stokes respiration arises, it occurs oftenest in uræmia, next in meningitis and other cerebral diseases, next in cardiac, and least in other affections. In all cases there is malnutrition of the brain, due either to toxic agents in the blood, to an imperfect blood supply, or to other causes.

It must be admitted that the exact nature of Cheyne-Stokes respiration is unknown. Very many theoretical explanations of it have been given. No explanation worthy of the name of theory was propounded until 1869, when Traube (*Berliner Klin. Woch.*, vi, 1869, 277) offered the explanation that in all cases less oxygen was carried to the medulla than was natural, that, therefore, it was less sensitive than it should be. Accordingly more carbonic acid gas was needed to rouse it to activity than under normal conditions. He believed the stimulus of an excess of carbonic acid gas in the tissues was transmitted to the brain by the pneumogastric and other sensory nerves. An unusual accumulation of carbonic acid gas in the system took place during apnea. It stimulated the respiratory center and thus excited dyspnea, but it was soon wearied and apnea reappeared. This theory is no longer tenable, for it has been demonstrated experimentally that Cheyne-Stokes respiration will continue even though the pneumogastrics and all sensory nerves that might transmit impulses to the brain are cut. In 1874 Filehne (*Berlin. Klin. Woch.*, xi., 1874, 152) propounded another theory, which I need not describe, for it, too, has been thoroughly disproven. He believed that rhythmic changes in blood supply to the brain were essential for the production of the phenomena. But it has been shown that Cheyne-Stokes respiration will continue even when the aorta is ligated and a varying blood supply is impossible. In 1877, Hein (*Wiener Med. Woch.*, xxvii., 317) announced his belief that whenever Cheyne-Stokes respiration was produced, vitality generally was lessened and the irritability of the medulla especially so; at the beginning of the pause in respiration, the blood was well oxygenated,

but during the pause it gradually became venous; at the beginning of the pause when tissue change was taking place vigorously the respiratory center became more irritable, and as the demand for more oxygen gradually increased it was aroused to activity and produced the succeeding dyspnea, during which the blood was again well oxygenated. This theory, as that of Filehne, is refuted by the experiments which show that variations in blood supply or tissue oxygenation has nothing to do with the phenomena. Moreover, if artificial respiration is maintained during a few of the respiratory pauses, it will not prevent their regular recurrence afterward. In 1879, Luciani (*Lo Sperimentale,* xxxiii., anno tome xliii., 341) and Rosenbach (*Zeit. f. Klin. Med.*, Band I., 583) independently propounded theories which are somewhat similiar and which to-day seem to be most tenable. They both believe that the respiratory center is automatic, although normally controlled by reflex motives, or by demands due to the nutrition in various tissues, or to mental states. Rosenbach believes that when Cheyne-Stokes respiration exists the whole brain is affected, although the medulla is especially so. The normal irritability of the central nervous system is lessened so that it feels influences from without less and its automatic power is more manifest. Its normal periodic exhaustibility is increased at times even to paralysis. The experimental proof which has been produced, that periodic respiration is not due to irritation of sensory nerves, or variations in blood supply or oxygenation of the nerve centers, is good evidence that the respiratory center is automatic.

That Rosenbach is right in thinking that the whole brain is involved seems probable, because of the complex phenomena which are associated with the characteristic respiratory movements. Ordinarily the medulla is first affected and produces periodic respiration; later other centers are involved and produce the pupillary, pulse and mental changes. The case described by Gibson, and already referred to, in which only the pupillary and mental phenomena of Cheyne-Stokes respiration were present, shows that at times the higher nerve centers may alone be involved or sometimes may be first involved.

Unquestionably, the best treatment is that which is applied to maladies causing Cheyne-Stokes respiration; for instance, the general treatment for uræmia when it is the cause of the respiratory phenomena. Improved cerebral nutrition and increased sensitiveness to reflex and external influences might be expected to directly aid the respiratory trouble. Therefore, as good nutrition as possible should be maintained, by carefully regulating diet and correcting

digestive disorders in chronic cases of Cheyne-Stokes respiration. Inhalation of oxgen gas has not unfrequently been prescribed, in order to improve cerebral nutrition and make tissue change generally more perfect. Different observers give conflicting evidence as to its utility. In several cases it has seemed to me useless. In the case which I described at the beginning of this paper it was administered very faithfully during the first period of Cheyne-Stokes respiration, and during the first part of the succeeding three weeks, when respiration was normal. About a week after the inhalation of oxygen was continued Cheyne-Stokes respiration reappeared. Oxygen was again used, but not as persistently, for it seemed to have no effect upon the respiratory phenomena or other symptoms. By these methods the attempt has been made to improve nutrition; and simultaneously strychnia has been given to increase the sensitiveness of the respiratory center. In the literature of the subject there is no evidence that strychnia has done good. Indeed most authors frankly say that it is useless. In uræmia it is contra-indicated, for it might hasten the onset of convulsions. There is one instance on record in which it apparently provoked Cheyne-Stokes respiration. This was in the accidental poisoning of a pet dog. The animal was thrown into convulsions by strychnia, but its owner so supported it that the convulsive movements could not be easily re-excited by external influences. Periods of calm were thus produced between the gradually lessening convulsions, in which characteristic Cheyne-Stokes respiration occurred. (Tuke, *Edin. Med. Jour.*, xxxiv., 1888-9.)

Venesection has done good in a few instances. By it impurities can be removed from the blood, and an overloaded heart and engorged cerebral vessels can be relieved. It has been resorted to chiefly in cardiac and cerebral affections.

Various soporifics have been tried. As, however, normal sleep occurring in the course of Cheyne-Stokes respiration does not always modify the respiratory phenomena, so soporifics cannot be expected to uniformly give relief. In some cases, it is true, sleep lessens the dyspnea. In such, morphin and chloral are most sure to give relief. Knaggs (*Lancet*, 1890, i., 744) reports one case that was greatly helped by paraldehyde. Sulphonal and urethan have been tried unsuccessfully. Hyoscin and atropin (Stadelmann, *Zeit. f. Klin. Med.*, 1894, 267) seem to aggravate the phenomena. The nitrites have been used by many observers, who undoubtedly hoped for as prompt relief of this nervous disturbance of respiration as is so usually obtained in asthma when these drugs are administered. Unfortunately they do

not produce any more uniform results than the soporifics. In several of my own cases nitroglycerin has afforded decided, although not complete relief, but in other cases it has been useless. In several I was unable to use it in efficient doses, because of the discomfort which it produced by dilating cerebral arterioles.

Cheyne-Stokes respiration cannot be regarded as always indicative of grave disease, for it occasionally occurs in health when sleep is unusually deep. If it is produced by drug narcosis it is significant of serious poisoning. In renal, in cerebral and cardiac affections, it is always to be regarded as a grave complication, and as usually indicating approaching dissolution. It is least significant of gravity when it is most chronic. It is very frequently completely recovered from. This is oftenest true when it occurs in connection with infectious and cardiac diseases.—*The Journal of American Medical Association.*

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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THE BACTERIOLOGY OF PERTUSSIS.

By Henry Koplik.

This communication appears in the *Johns Hopkins Hospital Medical Bulletin* for April, 1898. Of the many workers he considers only that of Afanassjew and Burger. The former's work appeared in the St. Petersburg *Med. Wochen*, in 1887. He describes a bacillus, which he regards as the cause. The next most important work on the subject was by Czaplewski and Hensel, published in 1897 in Germany. They isolated a bacillus or pol-bacterium having a size about the same as the influenza bacillus, and its character is described. Dr. Koplik collected in Petri dishes during a paroxysm of coughing. Small scale-like particles found in the mucus were inoculated on solidified hydrocele fluid. The bacillus can be seen with difficulty even, with a 1-12th oil immersion the zoogloea look like a collection of cocci. It grows on the hydrocele fluid as a delicate grayish-white pearly growth. On agar the colonies are irregularly round or oval, whitish by reflected light, straw color by transmitted light. A whitish granular stick is developed in gelatin with a nail-head and does not fluidify the gelatin. It grows in pepton bouillon and on

Loeffler's diphtheria serum, not on potato, grayish-white abundant growth on human blood serum.

Stained with Loeffler blue it is an exceedingly minute bacillus, thinner than the diphtheria bacillus and not more than ⅓ or ¼ its length. There are involution forms in old cultures. Loeffler methyl blue stains it deeply at the extremities. Some of the extremities or poles are round, some lancet shaped, one or two spaces in the long axis are not stained; spores or flagella have not been found. The movements observed are Brownian. No remits of any moment have been obtained from inoculation experiments. He concludes:

From the above it will be seen that from the sputum of pertussis cases in the convulsive stage, Czaplewski and Hensel and I, independently of each other, have isolated pure for the first time a bacterium which is constant and found in no other sputum. This bacterium is especially characterized by a minuteness comparable only to the influenza bacillus (Pfeiffer) or that of septicæmia of mice (Koch). In staining the dotted (not granular) appearance spoken of by me and compared to that of the bacillus of diphtheria, can best be brought out by the Loeffler alkaline blue stain. Fuchsin stains more coarsely and more uniform. The swollen end forms, or as I call them the involution forms, can also be brought out by Loeffler blue stain. I wish to point out here also that both in my first paper and in this I worked with pure cultures only (obtained by means of plate colonies). In this perhaps we find a reason why authors who have preceded the communications of myself and Czaplewski and Hensel differ so widely in what they saw. They failed to obtain the bacterium in pure culture. It may be remarked in passing that in my second cases as well as in some of my first cases there could be found among other bacterial forms a bacillus closely resembling the bacterium isolated in this work. This latter is somewhat thicker, grows in longer chains and fluidifies gelatin. I am inclined to think that observers have hitherto been much baffled by this bacillus, which I think with Czaplewski and Hensel is simply accidental. Such must have been the case of Cohn and Neumann.

I have tried to isolate my bacillus or bacterium in the early stages of pertussis before the convulsive paroxysm has appeared, and have not succeeded thus far in separating it from the saliva.

What significance can we attribute to the bacterium which is the theme of this paper? I doubt whether this can be solved except by direct experiment on the human subject. I may not be going too far to predict that the bacterium will aid us in understanding the mode of contagion in pertussis. It may be the first definite step in showing that in the sputum of the pertussis sufferer lies the danger of the communication of the affection to others.

THE THYROID GLAND-TREATMENT OF CRETINISM, WITH REPORT OF A CASE.

By SAMUEL H. FRIEND, M.D.

In the *Medical Press*, March 2nd, 1898, a case is reported by Dr. Friend with some general conclusions in regard to structural changes and their cause. He says:—

Cretinism, myxœdema, and other diseases allied to abnormalities of the thyroid gland have received such carefully detailed attention since the results of the work of Gull, Schiff, Ord, Reverdin, Kocher, Bircher, and Horsley were made known, that the time seems fitting to draw absolute conclusions as to the physiological function of the gland and to interpret the far-reaching physical effects caused by its disease or absence, and, at the same time, to indicate the range of the specific therapeutic application of thyroid treatment. The following report of a case of cretinism I trust may lend assistance in the interpretation of this curious disease :—

The case occurred in a female aged 14 years. All the features of an extreme type of cretinism were present and are fully detailed. The treatment was continued from April, 1894, to the time of her death in January, 1896. Mental and physical improvement resulted during the three periods of treatment. 4 to 5 grains of thyroid extract daily was the average quantity given. At the post-mortem examination no thyroid gland could be found around the trachea. On the left side of the cricoid cartilage was found a pear-shaped gland, 2.5 cm. in length, 1.2 cm. thick, and 2 cm. wide, resembling on section an enlarged lymph-gland. The thymus gland weighed 64 grains. Small glands studded the entire pleura. The other organs of the thorax and abdomen were normal except the bladder which was thickened, its capacity was half an ounce. A calculus was imbedded in its wall above the vertical openings.

Upon opening the calvarium the dura was found to be thickened and firmly adherent throughout its entire extent to the bone. Extending from 1 to 1.5 cm. on each side of the longitudinal sinus was a deep-red discolouration of the membrane, from which bloody fluid exuded. Nothing of interest was observed in connection with the pia mater. The grey and white matter of the brain was of normal consistence. About two ounces of bloody fluid were found in the lateral and fourth ventricles. The convolutions were flat and the sulci very shallow. The weight of the brain was 1.555 grams. As I desired to preserve it for future microscopic examination, sections were not made. The pituitary body was .8 cm. wide, .7 cm. long, and .3 cm. thick, and weighed 0.2 grams.

An examination of the marrow of all the bones revealed nothing but the red variety. A microscopic examination of the pear-shaped gland found in the thyroid location revealed nothing but hypertrophied and hyperplastic lymph-cells. A like study of the pituitary body, thymus gland, and suprarenal capsules, as well as of other tissues throughout the body, merely showed an excess of fibroid growth in all.

A study of this case strikingly illustrates the place occupied by the thyroid gland in the physiology of man, as well as the therapeutic application and limitation of its extract. Structurally there was present in this patient an increased thickness of the skin softening and inhibited growth of the bones with a compensatory enlargement after co-ordination was produced, and dwarfism.

As a result of the knowledge obtained by the study of the cases reported, it is evident that structural changes and their cause may be classified under the following headings :—

1. Congenital absence, diminution in size, or acquired atrophy

of the thyroid gland results in myxœdematous thickening of the skin, persistence and enlargement of the thymus gland, hypertrophy and hyperplasia of the lymph-glands, changed structure and retarded development of the entire osseous system, and dwarfism. Functionally, there is mental apathy and lack of development, retarded and deficient motor and sensory-nerve mechanism, and manifold inco-ordinations and muscular retrogression.

2. Acute disease of the thyroid gland results in softening and retarded development of the osseous system, and anæmia, producing a condition which retards absorption and excretion in the stomach and intestines, bronchitis, and abnormal nervous manifestations.

3. Chronic disease of the thyroid predisposes to malignant adenoid, and cystic growths, and microbic diseases.

4. Hypertrophy and hyperplastic excess of thyroid structure, as shown by Mobius and Greenfield, and by Horsley, results in exophthalmic goitre or Graves' disease.

Anatomical, physiological, therapeutical, and pathological data all tend to prove that the thyroid gland directly controls the co-ordinate growth and development of the entire organism; this evidence suggests that the diseases of the gland are limited by the absence, diminution, or excess of special gland structure, and by changes in the gland secretions and excretions, resulting in the production of cretinism, rickets, and exophthalmic goitre. It would seem, moreover, that the skin and thymus gland attempt above all other organs to compensate for the absence of the thyroid function, and that structural and functional diseases of the bones are directly caused by disease of the gland; and that the therapeutical application of the extract of the gland should be confined to conditions in which there is absence, diminution in size, or disease of the thyroid structure, as indicated by functional changes in the skin, sensory or motor nervous systems, structural changes in bones, and dwarfism.

BUBONIC PLAGUE IN BOMBAY.

Abstract of Report.

By KHAN BAHADUR N. H. CHOKSY,

Extra Assistant Health Officer, Bombay Municipality, appearing in the *Medical Press*, March 23rd, 1898.

The cases were treated in the Arthur Road Hospital situated on an island. He speaks of some incidents in regard to the carrying on of the hospital work and the difficulties met with. Once a mob of 1,000 natives attacked the hospital, having got it into their heads that the only object in the admission of patients was to kill them and send their hearts to Queen Victoria. Among the troubles was an invasion of quack selling specific remedies, who like vultures fattened on the dying.

The mortality was highest in February, 1897, when 81.64 per cent. of all admitted died. Of the races, the Hindus suffered most, their mortality reaching 75.46 per cent.; next to these came the Jews, whose mortality was 75.0 per cent. Mussulmans suffered least, their mortality being 66.38 per cent. As a rule, children bore the attack better than adults, and women better than men.

Of trades, the mortality was highest among blacksmiths, carpenters, cartdrivers and beggars; of the first three classes every one attacked died.

The clinical report tells us that a third of the cases admitted were in a moribund condition.

Six types of the plague, as follows, are enumerated by the author:—

1. Pestis minor.
2. Pestis ambulans.
3. Pestis simplex bubonica.
4. Pestis septicus.
5. Pestis pulmonalis.
6. Non-typical forms of plague.

Of these, the pulmonary form, which is usually unaccompanied with bubonic swelling, is the worst. It "is a frightful source of spreading the infection from the sputum, which is loaded with plague bacilli."

Referring to the condition of the patient the author declares that "Aphasia, with high fever, and the peculiar aspect of the patient, would be a strong presumption in favour of plague."

Of temperature we learn: "The range of temperature, except when it is very high, is no criterion of the severity of the case;" and that "the temperature generally ends by lysis—crisis being exceptional. When the latter is observed, and it has a fall of from 4 degs. to 5 degs. or 6 degs., it almost invariably indicates collapse and impending death."

Sometimes it is observed that on the second, third, or fourth day, the temperature falls to normal or thereabouts, rises suddenly and again falls, the case ending fatally with the second fall.

After the buboes are incised, the temperature may show a slight evening rise, but in ordinary cases, when suppuration and sloughing are not extensive, and there is no retention of pus, it soon falls to normal, and continues so until complete recovery.

The bubo may appear before, with, or after the rise of temperature, but, as a rule, its appearance is coincident with it.

The size of the bubo was quite independent of the gravity of the case, small glands the size of a pea have proved fatal; on the other hand, cases with large and diffused buboes have turned out to be apparently mild attacks.

Of the 939 cases admitted, 8·83 per cent had buboes.

Pulmonic cases formed 8 per cent. of all admitted to the hospital.

More than half of the 856 bubonic cases had the buboes in the femoral and femoro-inguinal regions.

Once the buboes have appeared, they take one of two courses. They either resolve or end in suppuration, or suppuration and sloughing. Suppuration is, however, the more frequent method of termination.

Delirium, if present, may be acute and active or low muttering, as in the typhus condition. Hallucinations were not uncommon.

Of the circulatory system we read:—"In no other infectious disease does the pulse—an index of circulation—present so many variations in force, frequency, volume and tone." In the majority

of cases the pulse is compressible, extremely feeble and very frequent. Dicrotism in some cases is extremely well marked, and in advanced cases may really be considered a trustworthy diagnostic sign.

The heart sounds have always been found to be clear, in some cases the first sound may be weak, and the second slightly accentuated, and no bruits or murmurs were audible. Pains in the præcordial region and occasionally palpitation may be complained of, but practically the patients had very few complaints about the circulation.

Bacteriological examination was systematically carried out. It was observed that in many undoubted cases of plague, no plague bacilli could be detected or grown from the blood, and it appeared as if in such cases they were confined to the lymphatic system alone. Most of these cases eventually recovered.

Increased frequency of respiration is one of the symptoms that attracts early notice in the plague, and in which, besides the lungs, the larynx also becomes involved. In some instances the tonsils and pharynx become covered with a pseudo-diphtheric membrane, which extends to the larynx and trachea.

Œdema of the lungs is the usual cause of death in the non-bubonic cases, pneumonia in such cases being secondary and responsible for a comparatively small number of deaths.

The digestive system suffers greatly, hiccough is occasionally a very distressing complication, and not unfrequently is found associated with meningitis.

In women menorrhagia and metrorrhagia were usual, and pregnant patients aborted.

The following diagnostic points are given:—

1. The presence of fever, high or low.
2. A quick, easily compressible pulse.
3. A furred tongue.
4. The aspect of the patient by facies pestica.
5. The peculiar hesitating, broken speech.
6. The presence of a bubo.
7. Suffused eyes.
8. The presence of cough, with rusty or hæmorrhagic sputum.

Prognosis in the pulmonic type of plague is the least hopeful, as very few cases recover. Hæmorrhage or hæmorrhagic discharges are also grave.

After five years of age the percentage of deaths increase with each year of life. Of the causes of death the most important is failure of heart's action, and it may be either sudden or gradual.

Convalesence is extremely tardy, and patients go on for a long time, day after day, without making the slightest progress.

Among the sequelæ of plague may be noted aphasia, which is generally temporary, peripheral neuritis, irritability of temper, imbecility and insanity.

No cases of genuine relapse have been observed.

The preventative measures were radical and much to be praised. "All clothing and other belongings to the patients were destroyed by fire, and all the sheets, blankets, pillows, quilts, etc., used for the patients, were similarly treated."

The death of Dr. Davda three weeks after he had been inoculated with 10 c. c. of Dr. Yersin's serum was deemed a sufficient proof of its uselessness as a preventive.

Of the curative treatment the best results were obtained from strychnine and morphia, both of which could be pushed to more than the usual limits of tolerance.

The diet was essentially a milk one. Pyrexia was treated with cold sponging and the application of icebags. No remedy gave such good results in delirium as morphia.

Rum was the principal stimulant.

Infusion of digitalis was freely given in cases of cardiac irregularity.

Vomiting and hiccough, which were at times very persistent, were treated with cocaine.

We have given an unusally large space to the notice of this great Report, which reflects credit on all concerned with the good work of fighting the plague in Bombay.

We are the more pleased with it than we usually are with Reports, for the task of its production was immense in the midst of such surroundings. To produce the volume, inexhaustible patience, untiring industry, and a great love of the art of medicine were necessary.

The completed work now lies before us with its statistics, clinical reports, charts, post mortems, and summaries, a testimony to the intelligent, systematized, well-directed industry of the author, and a rich addition to the medical literature of the plague.

SURGICAL MEDICINE.

Time was when surgery and medicine were separated by a strict line of demarcation, easy to trace and obvious to all; but just as the progress of science has broken down the theoretical barrier between organic and inorganic chemistry, so the advance of knowledge has bridged over the gulf which once divided all cases into two great classes. To such an extent have the limits of surgery retreated, that it is at present very difficult to say what is, and what is not, a fit subject for operative treatment, and there are signs that further advances are contemplated all along the line. In the ingenious, if somewhat paradoxical, paper read by Mr. Treves before the Medical Society, of London, attention is directed to a very curious and interesting series of cases in which abdominal section, performed under a misapprehension, has been followed by relief and even by cure of the patient's symptoms. These accidental successes, in respect of tuberculous peritonitis, have almost raised the procedure to a recognized position in the treatment of a, medically considered, not very promising condition. Speculation is rife as to the probable explanation of the beneficial results of this intervention, but, so far, no very plausible hypothesis is forthcoming of the *modus operandi*. The problem is rendered the more obscure by the fact that the simplest intervention usually gives the best results. In other words, the mere opening of the abdomen is more frequently followed by resolution than elaborate measures of dealing with the diseased condition. Even more remarkable is the fact related by

Dr. Lauder Brunton, that in a case of advanced phthisis complicated by tuberculous invasion of the peritoneum, abdominal section not only cured the latter, but was followed by subsidence of the pulmonary disease, the patient who, at the time of the operation, was expected to die at no distant period from the lung trouble, being at present alive and well. Such observations as these seem to open up a new horizon for surgical activity, and Dr. Brunton even suggests that the time may come when abdominal section will be habitually resorted to for the treatment of pulmonary tuberculosis. Far fetched as this may seem, it is really not more startling than the now recognized operation of opening the abdomen for tuberculous peritonitis. It really looks as if the craze for trepanning, which characterized a certain epoch of primitive surgery, was about to be revived, the abdominal parietes taking the place of the cranium. It may be assumed that our forefathers derived, or thought they derived, some benefit from this proceeding, and its scientific basis was probably as sound, or as unsound, as that of the actual phase of abdominal section. Just as in abdominal surgery, relief of symptoms not unfrequently follows operation, although no lesion has been discovered after the most careful examination, so, in the surgery of the cranium, the gravest phenomena have been found to disappear after a fruitless trephining. This at once suggests that the mere relief of internal pressure must have had some share in the beneficial results of the operation, whether on the cranium or the abdomen. We know very little as to the bearings of internal tension, and such an explanation is, to say the least, much more plausible than the suggestion that the effects are due to letting light into the peritoneal cavity. This explanation may even apply to the influence of the operation on pulmonary disease, seeing that the communications between the thorax and abdomen are numerous and free. We prefer it to Dr. Brunton's suggestion that the opening up of the peritoneal cavity may give rise to the production of a true antitoxin, especially as the therapeutical use of antitoxin in the treatment of phthisis has not so far been attended by any marked success. The occasional and inexplicable relief which sometimes follows these random operations unquestionably creates a danger that recourse may be had to them with too much readiness thereby at the risk of bringing surgery into disrepute. Already, indeed, routine recourse to an exploratory incision tends to take the place of careful clinical diagnosis. It is so much easier to cut down and ascertain *de visu* the actual condition of affairs than laboriously to scrutinize the clinical phenomena with a view of arriving at a correct diagnosis. Surgeons may hint that the physicians' loss may be the patients' gain, but this is an assumption which can hardly be justified in view of the unnecessary risk, small though it be, which such an operation entails to the patient. Moreover, an exploratory incision is not a means of diagnosis which can be resorted to by the ordinary practitioner who runs the risk of being deprived of the ability to make an inferential diagnosis and of finding himself stranded in consequence. As far as possible an exploratory incision should come when all other means of arriving at a diagnosis have failed, or to confirm a diagnosis which, if correct, would justify surgical intervention.—*The Medical Press*, *March* 6, 1898.

CARBON DIOXIDE.

L. H. Watson (*New York Medical Journal*, Jan. 15, 1898, *Medicine*) advises water charged with this gas and also the introduction of the free gas into the stomach to allay vomiting. He believes it is anesthetic to the mucous membranes, antiseptic, and mildly stimulating. It may be administered by inhalation and swallowing from tanks of compressed gas. A gauge and regulator on the tank regulate the pressure. The regulator should be set at a pressure of from six to eight pounds; a stop-cock with three feet of rubber tubing terminating in a glass mouthpiece is then connected with the tank. The patient while fasting is directed to place the glass tube in his mouth, slightly depressing his tongue at the base. He is then directed to draw in his breath and hold it. The stop-cock is turned and the gas allowed to flow into the esophagus and stomach. The pointer of the gauge falls back to zero, and the pressure is shut off, the patient withdrawing the tube and swallowing. No trouble from choking is experienced. This operation is repeated every minute for four or five minutes, and then a rest is allowed. The sensation is rather pleasant. Most patients express satisfaction. There is a feeling of warmth in the stomach, with a sense of exhilaration, while no unpleasant distention is noticed, although the stomach may be so fully dilated as to allow one to define its outlines. Each séance lasts from fifteen to twenty minutes. No patient has experienced the slightest discomfort from the use of this gas. It can also be easily used for the purpose of dilating the stomach for diagnostic purposes, by connecting the rubber spray tube of Einhorn with the glass mouthpiece.

ENTEROPTOSIS.

Langerhans (in *Archives fur Verdauungskrankheiten, Bd. III., Heft* 3,) concludes that a moderate degree of enteroptosis, when it is consecutive upon frequent child bearing, is physiological and productive of no symptoms. The most frequent symptoms of this condition are those of aggravated dyspepsia, pain and demonstrable abnormality of secretory and motor functions. The descent of abdominal organs changes the mechanical relations, so that lasting injuries sometimes result, due to pressure upon the unprotected kidney, to increased demand upon the propulsive muscles of the stomach and always to a stretching of the mesentery. By the cumulative effect of these numerous and continuous irritations, even though each in itself maybe slight, the central nervous system becomes exhausted and, according to individual predisposition, neurasthenia or hysteria with especially pronounced abdominal symptoms supervenes. Chronic constipation is generally a marked condition.

Treatment consists—first and most important—in gymnastics of the abdominal muscles and then symptomatic therapeutics.—*Boston Med. and Surg. Jour.*

ORTHOFORM.

In the *Lancet* the new substance orthoform is described as a methylic ether of amidobenzoic acid and as possessing remarkable anesthetic and analgesic properties when locally applied. It is a white crystalline powder without taste or smell and but slowly soluble in water. It is nonpoisonous, rather slow in action, but persistent in effect. It is antiseptic, diminishes secretion and can be used internally and upon broken surfaces in large amounts; as much as 700 grains has been applied to a carcinoma of the face in one week without untoward effects. The hydrochlorate is readily soluble in water, but the solution is too acid for use in the eyes, although it can be used internally; a saturated watery solution is suitable for local use; while a dose of 7½ grains of the hydrochlorate internally several times a day produces no untoward symptoms; it would seem indicated in gastric ulcer and cancer. Orthoform is shown to be superior in its application to cocaine or eucaine and altogether harmless so far as reported.

TREATMENT OF POLYNEURITIS.

THE treatment (*Med. Standard*) is divided into five groups, according to the prominent groups of symptoms: (1) Combat pain by use of morphine, antipyrin, sodium salicylate, salophen, or methylene blue internally; by external applications of solution carbolic acid, 4 to 5 per cent.; by judicious use of water and by hypodermic injection at painful areas of a mixture of a 2 per cent. solution acid carbolic, with a 1 per cent. solution morphine in quantity of one cubic centimeter or less. (2) Combat insomnia by use of potassium bromide, morphine (contraindicated in vagus involvement), chloralose, sulfonal, trional, paraldehyde and chloral (in alcoholic neuritis with care). (3) Combat paralysis—if craniobulbar, energetic and prompt measures are demanded—by use of hypodermic injections of caffein, ether and camphor, using faradism if dyspnea and cyanosis be present; use mustard applications, thrashing with cold cloths, faradisation, oxygen and strychnin. (4) Combat deformities due to defective attitudes and tendon retractions by the use of splints and bandages to retain the parts in normal attitudes. (5) Curative: give a diet rich in phosphorus, hot baths, salt baths, strychnin, electricity—galvanic and faradic,—fresh air and sunlight.

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.,

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospital.

EXPERIMENTAL STUDY OF WOUNDS OF THE HEART.

By DR. FREDERICK BODE, (Frankfort).

It has been demonstrated by the outcome of Professor Rehn's case (Twenty-sixth German Surgical Congress) that suture of the heart can be performed with success. Heretofore the views on the subject had been very conflicting, and the knowledge of the heart behavior under such circumstances was very scanty. The author has therefore undertaken an experimental investigation of the reaction of the heart after injury, the resulting symptoms, the influence of suture of a division of the heart on the continuation of regular heart action, and, finally, the several factors which, on the one hand, result in healing of a wound and those, on the other hand, which terminate immediately or later in death.

Whatever chamber of the heart was implicated a hæmorrhage during systole was observed. This occurrence held good for all the smaller wounds; in the larger, and in injuries to the auricles and the efferent vessels, a diastolic bleeding was also either unmistakably noted or else its non-occurrence could not be clearly established. The pressure of the escaping blood was lowest in the auricles and highest in the left ventricle. The amount lost, however, was not in a constant ratio to the pressure, except for extensive wounds of the ventricles. In other injuries a complicated vicarious action of the heart occurred, as during the systole of any given portion dimunition in size of the wound by muscular action resulted, being most marked when the muscular wall was thickest. A minute wound of the left ventricle consequently occasioned less loss of blood than a similar one in the other divisions of the heart. Non-penetrating wounds generally excite but little bleeding synchronous with the heart's action.

All the larger wounds of the heart quickly resulted in death from disturbances of circulation and impairment of organic functions, while from the smaller wounds of the ventricles, the hæmorrhage gradually diminished and stopped spontaneously, the time required for wounds of the left ventricle being usually quite short. Wounds of the auricles, right or left, are much more dangerous than those of the ventricles.

In suture of cardiac wounds, the technical difficulties are much lessened after the insertion of the first suture, which can be used to anchor the organ. When the needle pierces the tissues there is a momentary stoppage, succeeded by a period (usually brief) of irregular and increased action. The axis of the line of suture has no special influence on the action.

Full details of the experimental work with cardiograms are appended.—*Beiträge zur klinischen Chirurgie*, Band XIX, Heft 1.—*Annals of Surgery*, Dec., 1897.

TUBERCULOSIS OF LYMPH-VESSELS OF THE EXTREMITIES.

By PROFESSOR JORDON, (Heidelberg).

The newer works on surgery fail to mention this affection, and only slight allusion to it is made in the treatises on pathology, and its existence had not been recognized up to 1880. It is the only form of tuberculosis of the lymph-vessels that possesses any surgical importance. The author has recently seen four cases, and from a consideration of their course and a review of the scanty literature he has made the following observations:

The disease is most frequently situated in the upper extremity. The two sexes are affected equally; most of the patients are young adults. Other tubercular processes are almost always absent. In all cases the peripheral focus was the original and only source of tubercular trouble; it was in all cases situated in the skin of the hand or foot. The lack of evidence of a hereditary disposition and absence of other forms of tubercular disease point strongly to the probability of inoculation, and a majority of the cases gave a more or less definite history of such an origin.—*Beiträge zur klinischen Chururgie*, Band XIX, Heft 1.—*Annals of Surgery*, Dec., 1897.

AN OPEN SAFETY PIN SWALLOWED.

Dr. B. F. CURTIS exhibited a safety pin which while open had been swallowed forty-eight hours before by a baby of six months. The infant had been brought to the babies' wards of the Post-Graduate Hospital next morning. An x-ray photograph taken this day showed the pin lying just within the anus. The case was interesting, because a moderately small safety pin had been swallowed while open and had caused only slight reaction. The temperature had not risen above 101° F. The parents gave no purgatives, but fed the child freely on bread. Another point of interest was the very rapid passage of the pin through the alimentary

canal. It was an excellent rule in practice, whenever a child was brought with the statement that it was supposed to have swallowed a pin, to examine the pharynx with the finger, as the foreign body would not infrequently be found within reach of the finger. In the present case it was shown that it was also desirable to examine the rectum even within twenty-four hours.—*Medical Record*, April 23, 1898.

GLOVES FOR ASEPTIC SURGERY.

To the Editor of the Medical Record.

SIR: Gloves for employment in aseptic surgical work have been recently advocated on theoretical grounds by so many prominent surgeons that many of the younger men feel in duty bound to use such gloves in order to be up to date. To all such younger men who have misgivings prompted by natural sense, I wish to state that one surgeon at least can be depended upon to fortify them by his example in refusing to adopt anything that will injure the surgeon's most precious possession—the sense of touch. I have been much interested in everything that seemed to be in the nature of progress in surgery, and have given close attention to the matter of gloves for aseptic surgical work, but have arrived at the conclusion that the practical disadvantages of gloves counterbalance their theoretical advantages. Surgeons who were doing first-class work three years ago seem to me to be doing second or third rate work now on account of the interference made by their gloves. The greatest danger to be feared is that the younger generation of surgeons may fail to develop the sense of touch to the highest degree, and we shall have much second rate work done, particularly in abdominal surgery. If any one employs gloves in peritoneal work—in removing adherent appendices and pus tubes, for instance he is liable to obtain statistics which are believed by his rivals, and he must make long incisions and do slow work that shocks the patient, and he must do much incomplete work when he is forced to depend upon the coarse, commonplace sense of sight.

I have watched various European and American operators at work with gloves, and have asked about their statistics. I will choose Weir's nascent-chlorine skin sterilization and untrammelled fingers that are quick to work deftly in doing neat, accurate work. My statistics will always be at the disposal of men who wish them for comparison with glove statistics. To the younger generation of surgeons, I say, fight with your might against the idea of using a means that will damage your most precious possession—the sense of

touch. Put aside the temptation to be up to date theoretically, at the cost of adopting a destructive agent in your work. As a test of skill palpate a normal appendix instead of trying to secure a pediculus pubis with the aid of a pair of boxing-gloves.—*Medical Record*, April 23, 1898.

ROBERT T. MORRIS, M.D.,
49 West Thirty-Ninth Street.
NEW YORK, April 8, 1898.

OBSTETRICS.

IN CHARGE OF
H. L. REDDY, M.D., L. R. C. P., London,
Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

PROF. SCHENCK'S RESEARCHES ON THE PREDETERMINATION OF SEX.

Prof. S. treats the subject under three heads. A summary of the writings of his predecessors, an account of his own researches and deductions, and, thirdly, a description of the method of treatment he has devised with cases

In the first part, he agrees with the conclusions of various writers that, if the sexual power of the male be greater a female offspring is more likely to result and *vice versa*. With regard to environment upon sex, in warm climates females predominate, in cold and unfavourable males. The second part begins with the enunciation of the fact observed in domestic animals and in insects that the better the mother is nourished the more females she produces, the number of males remaining constant. Schenck set out upon a series of observations based on the theory of crossed sexual inheritance. He first investigated the excreta and particularly the carbohydrates of the urine. The presence of a certain amount of sugar, which is commonly recognizable by the phenylhydrazine test in perfectly normal individuals, indicates incompleteness of the oxidation process whereby a certain quantity of heat is lost to the body. Now the quality of sugar normally excreted is equal in men and women, but more significant in the latter owing to the lesser activity of their metabolic processes. For the perfect ripening of the ovum, it is necessary that oxidation shall be perfect. That is, that no sugar shall be left unburnt. Where there is a remainder of unburnt sugar the ovum stands a chance of being less ripe and well nourished. Hence the properties of its protoplasm are less well developed, and by the theory of crossed inheritance it is more likely to produce a female child.

On the other hand, when the urine is free from sugar the ovum can attain perfect development and give rise to male offspring. It is upon this cardinal principle that Schenck's theory is based. He holds that a prolonged course of appropriate nourishment both before and after fertilization will tend to the conception of male children only. The next question is of the means to be adopted. If a male child is desired and the maternal urine contains no sugar but abundance of reducing substances (particularly the levorotatory glycuronic acid) he allows impregnation forthwith. If, on the other hand, sugar is present, it must be removed. Finally, Schenck gives his clinical results. He quotes numerous cases to show that the bearing of female children is associated with glycosuria. In such cases, he recommends a diet comprising plenty of proteid and fat and as little carbohydrate as can be tolerated. This must be taken for 2 or 3 months before and after impregnation. He concludes after giving examples (such as, in one family where six boys had been born; under this theory and treatment a girl immediately followed). In countries where much flesh is consumed there is a marked prepondance of male children. The birth of male children can thus in certain cases be predetermined, but the voluntary production of girls is a problem as yet unsolved.—*Med. Rev.*

RECTAL IRRIGATION IN ECLAMPSIA.

An interesting case is recorded by Sené as showing the remarkable results obtainable by copious rectal irrigation. The case was that of a patient in the seventh month of pregnancy, who developed eclampsia. A copious bleeding caused arrest of the convulsions, but she shortly fell into a condition of complete coma, with total suppression of urine. For half an hour a copious enema of tepid water was administered, about five minutes being given to the injection, the torpid condition of the patient greatly facilitating the operation. At the end of twelve hours, the patient began to recognize when spoken to in a loud voice. Shortly after sensation showed evidence of returning, and a small amount of urine was passed, while occasionally fæcal material was returned by the enema. The next day the coma had completely disappeared; the patient replied to questions, but had no recollection of the events of the previous forty-eight hours. Micturition became completely re-established, and delivery was effected on the fourth day, with disappearance of all the symptoms. There is no doubt that a portion of the injected water became absorbed, acting as a diluent to the blood, thereby reducing its toxic effect on the nerve centres.

THE CURETTE AFTER ABORTION AND DELIVERY.

Buttner (*Centralbl. f. Gynak.*) has observed 28 cases where the operator was Glaevecke. He finds that the use of the curette is free from danger if carried out with proper precautions. It permanently stops hæmorrhage after abortion or delivery, and, as a rule, the catamenia return soon, and continue normally, contrary to what is so often seen in mismanaged cases. A skillful use of the curette likewise prevents those morbid changes which are the cause of sterility.

HYSTERECTOMY FOR ACUTE PUERPERAL SEPTIC METRITIS.

Vineberg (*New York Med. Jour.*, April 2nd, 1898) reports a successful case. Symptoms began on the sixth day after confinement ; three days later curetting was done, and was followed by improvement for twenty-four hours. On the twelfth day the patient was taken to hospital, apathetic, delirious, with temperature 103°, and pulse 130. Intra-uterine irrigations brought away no *débris*. On the evening of the thirteenth day she seemed sinking, and abdominal total hysterectomy was done. On cutting open the uterus the whole interior above the cervical canal was covered with a dark, tenacious, slimy discharge, emitting a very foul odour. Attached to the left horn was a piece of placenta 2 cm. by 4 cm., and firmly adherent. The patient left hospital in six weeks. The author explains the lateness of the onset in these cases as follows :—A piece of retained placenta disintegrates, and the *debris* are at first carried away with the lochia. After a week the cervical canal becomes moderately closed, and at the same time the heavy fundus sinks forward, so that escape of the discharges is interfered with, resulting in absorption and sepsis. This may occur without fœtor of the lochia. The proper treatment is immediate curettage, followed by special precautions to allow of subsequent drainage. If this fail, as shown by rapid weak pulse and loss of ground by the patient, hysterectomy should be done. In a foot note to the paper the author reports a second and later case, where the same treatment was successfully carried out. He gives references to eight other cases reported

PREVENTION OF LARGE MAMMARY ABSCESSES BY EXPRESSION OF THE MILK.

Wilfred B. Warde (*The Lancet*) has found that expression of milk from the circumference of the breast has produced excellent results, especially in cases of imperfectly

developed breasts or nipples. The induration in these cases is due largely to inflammatory thickening and only secondarily to the retention of milk. In these cases only a small quantity of milk will come away as the result of expression, but the hardness and induration will gradually subside and no abscess form. A case in illustration is that of a primipara, who had weaned the child, and for a month had no trouble with her breasts. She attributed the subsequent trouble to sleeping in a very cold, damp room. When seen by the doctor she was sweating profusely, with a temperature of 101.8° and pulse of 120. The pain in the left breast was so severe that she dared not move. The breast was large, the skin over the outer half red and œdematous, covering a hard tender lump. The axillary glands were swollen and tender. Free manipulation of the breast was at first extremely painful, but eventually gave some relief. A small plug of greenish yellow mucus came from the nipple. The breast was bandaged, and a purge administered. The following day the temperature was 103°. The outer half of the breast was occupied by a doughy, painful mass. To the writer's surprise, manipulation of the breast was followed by the exudation of six large drops of pure pus from the nipple, to the great relief of the patient. Poultices were ordered, and the next day the temperature was only 99.2°. The swelling was less. A few more drops of pus followed the manipulation. From this time on the indurated mass gradually softened and disappeared. It would seem that there was really an abscess in this case, and that the pus was evacuated through the nipple. The course followed is commanded by the writer as advisable in similar cases.

PUERPERAL INFECTION.

St. Joseph B. Graham (*Virginia Med. Semi-Monthly*) says that the causes of puerperal infection may be classified as follows: Streptococcus pyogenes (usual cause); staphylococcus pyogenes aureus and albus; Klebs-Loffler bacillus of diphtheria; bacillus coli communis; gonococcus of Niesser, and perhaps the bacillus of malignant œdema. These germs may be introduced, either from the patient or her dressings, or, what is more usual, from the hands, instruments or dressings of physician or nurse. Admission is gained either through a solution of continuity, or through the puerperal endometrium.

The pathological changes depend on the germ producing the infection. The most marked changes are in the blood, which becomes thick and dark, acid in reaction and decom-

poses quickly; leucocytes and red corpuscles are disintegrated. Hæmorrhagic foci are found in the internal organs. With mixed infection pyæmia will occur.

Preventive treatment must first be considered. Any abnormal secretion from the vagina must meet with appropriate treatment. In health the vaginal secretions are antiseptic, hence preliminary antiseptic douches are uncalled for.

As an antiseptic for the hands of the physician and nurse, a two or three per cent. solution of formalin is recommended, to be used after a thorough scrubbing with nail brush and soap. The external genitals of the patient should be well scrubbed. As few vaginal examinations as possible should be made.

After infection has occurred a douche of formalin, one to four per cent., is preferred, as it is non-toxic, and only slightly irritating, yet ranks foremost as a germicide. The uterine cavity should be thoroughly cleansed by the finger or curette. A suggestion, which has not been tested by the writer, is the conveying of formaldehyde gas combined with vapor of alcohol into the uterine cavity. Theoretically, it should prove of value. The constitutional treatment must depend on the kind of infection present. The antistreptococcic serum or the antidiphtheritic serum should be used as indicated. The patient's vitality should be sustained by proper remedial agents, and the writer believes in pushing alcoholic stimulants.

A SPECIFIC FOR PUERPERAL ECLAMPSIA.

F. S. Wright (*Cincinnati Lancet-Clinic*) reports three cases of puerperal eclampsia in which the application of an ice-bag to the head and over the carotids seemed to control the convulsions. In the first case chloral and morphine had been used without avail, but after the application of the ice no more convulsions occurred. In the second case the ice was supplemented by a full dose of veratrum viride. In the third case there was apparently no other remedy than the ice used, yet the convulsions ceased.

COLLES'S LAW.

Hochsinger gives a lengthy discussion on Colles's law as it now stands, and on the questions which are connected with it. His conclusions are as follows: (1) Healthy women who have been impregnated by syphilitic men can give birth to syphilitic children, but remain free from syphilis all their lives.

(2) Women who are pregnant with the fœtus of a syphilitic father, but free from contact infection from him, acquire through such a pregnancy a certain but very variable degree of immunity against syphilis, which has been the foundation for the so-called Colles's law. (3) Colles's immunity of the mother is the result of immunising substances derived from the spermatically infected fœtus and is not absolute. (4) The exceptions to Colles's law concern women who, for reasons not always easy to discern, have only absorbed an insufficient quantity of the immunising substance during pregnancy, or in whom the requisite tissue activity for the establishment of immunity is absent. (5) A retro-infection of the mother from a spermatically infected fœtus, the so-called *choc en retour*, or "syphilis by conception," is clinically not proved, and not provable, although theoretically not difficult to establish. (6) Finger's hypothesis of the toxic nature of tertiary syphilis and of the crypto-genetic tertiary infection of the mother, is incompatible with Colles's immunity, and is at variance with the pathological anatomy and clinical experience of early congenital syphilis. (7) Hereditarily syphilitic children infected by the father should not be suckled by the mother if it is her first child, and she is free from syphilis. If the mother has had several spermatically infected children, and is still free from syphilis she may confidently suckle the child.

PUERPERAL CONVULSIONS.

Dr. Thayer, in *Boston Med. and Surg. Jour.*, says that in the condition of the nervous system that exists in puerperal convulsions, there is a peculiar tolerance of veratrum viride, so that the officinal dose has no effect. But large doses quiet the nervous erethism, producing a decided effect in a short time,—sometimes in fifteen minutes, but almost certainly within an hour,—and keeping the nervous system under control for several hours.

The administration is followed by cooling of the surface, great lowering of the pulse in rate, but not in strength, and along with this complete arrest of the convulsions. The state of the pulse is the guide in treatment. From a high rate, which rules in the disease, it is reduced to the normal standard or below it; and while it is kept below sixty there need be no fear of a recurrence of the paroxysms. When this effect has been once produced, it will continue several hours, and a single dose will do it; if not apparent within an hour or less, the medicine must be repeated in smaller doses; and it can be safely repeated at intervals until the pulse be-

gins to fail. With the pulse for a guide, no untoward symptoms need occur from its use; the pulse may be brought down to fifty, without any general depression; if carried so far as to produce vomiting, we may find great prostration produced by the nausea, which is overcome within thirty or forty minutes by opium, or any diffusible stimulant,—perhaps in less time by a solution of morphine hypodermically.

ALBUMINURIA AND PAST AND FUTURE PREGNANCIES.

Blaudeau publishes information of much importance as to albuminuria in past pregnancies and the prognosis if the patient should again conceive. Altogether albuminuria in pregnancy seems to prevail most in first, second, and third gestations, becoming rarer in multiparæ. Blaudeau has worked in the Baudelocque Clinic for the last two and a half years for the necessary statistics. He came upon 23 cases of pregnant multiparæ who had suffered from albuminuria in earlier gestations. In 13 not a trace of albumen could be found in their urine, which was repeatedly examined; 3 out of the 13 had convulsions in previous pregnancies; 1 of the 3, indeed, had 11 eclampsia attacks in an early labour, yet when again gravid, some eighteen months later, neither albuminuria nor eclampsia occurred. In 8 of the total 23 albuminuria recurred, but in a milder form, whilst the infants were stronger than their elder brothers. In 2 of the 23 only was the albuminuria worse than in earlier pregnancies; 1 had eclampsia and 1 was prematurely delivered of a macerated fœtus.

Dr. Hergott (*Rev. Med. de l'Est*) being dissatisfied with the effect produced by the usual antigalactogogues, including antipyrine, has tried camphor, and finds that nine and one-quarter grains a day divided into three doses, and given for three days, nearly always produce a remarkable diminution of the secretion. He has used it in thirty cases, having been first led to try it by the good results obtained by Kiener in animals, especially milch cows.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March 18th, 1898.

ROBERT CRAIK, M.D., PRESIDENT, IN THE CHAIR.

EXCISION OF THE TONGUE.

Dr. G. E. ARMSTRONG exhibited two patients from whom he had excised the tongue, and reported the results of five cases on which he had operated during the winter. The reports will be published later.

THE STATIC MACHINE IN X RAY WORK.

Dr. ROBERT WILSON showed a small Tœpler-Holtz static machine (made by himself), to illustrate the use of the static current to illuminate a medium-sized x-ray tube. The two revolving plates of ⅛ in. hard rubber, were 18 ins. in diameter, with six German-silver sectors on the front one. The machine was cased in, containing a tray with 2 lbs. calcium chloride, well dried. The necessary speed (500 to 900 revolutions) was easily obtained by a hand-driving gear, or (this being removable) by an electro motor, or small water-wheel. The latter was the method adopted by himself, a speed of 900 revolutions being easily obtained from the office water-tap. The machine was not intended to compete with a large coil, but gave with an Edison "medium" high vacuum focus tube, perfect definition of the bones of the extremities, up to the shoulder and pelvis. Among the radiographs shown were: Ununited fracture of tibia with faulty union of fibula; point of a scalpel (1-32 ins.) broken in finger while amputating terminal phalanx, etc., etc.

In reply to questions, Dr. Wilson said the entire outfit had cost him less than $25, including 6 by 8 calcium tungstate fluoroscope (home made), and one Edison "medium" focus tube. He thought a similar outfit could be placed on the market for $50. He had never had any trouble from dampness; in fact, it had been raining slightly when the machine was brought from his home, still it excited immediately. He did not use Leyden jars and spark-interrupters, although convinced these devices would increase the powers of the machine; it worked sufficiently well without them. A machine of this size was absolutely useless for medical diagnostic work, but indispensable to one doing general surgery. One glance at an arm, leg, hand, etc., without disturbing the clothing, being sufficient to satisfy one as to presence of fractures, dislocations, foreign bodies, etc. He preferred the static current, as being less dangerous, less liable to give away at a critical moment, less trouble, less expensive to operate, less liable to puncture the tube, and of immensely higher voltage than the coil, with the further advantage of being able to use the current therapeutically. In Dr.

Monell's office in Brooklyn, he had seen the doctor's heart pulsating perfectly at a distance of seven feet four inches from the tube; the pelvis, shoulder-girdle, etc., perfectly outlined at 4 feet from the tube. Dr. Monell used an 8-plate 30-inch machine, driven by a one-sixth h. p. electro motor at 250 revolutions; such a machine was used for medical purposes as well as X ray work. The result obtained far excelled anything done by coils. The advantage of getting a distance away from the tube was the elimination of error due to enlargement of the shadows when too close. The speaker had ordered, and expected delivered by the middle of May, an identical machine. The barium-platino cyanide screens, on stretched vellum, were preferable where one wished to *see* the shadows; the calcium tungstate screens were the best for skiagraphic work. As to focussing the rays outside the tube, a question of vital interest to scientists, and on which he had, in a small way, been experimenting, he said he thought it would be premature to make any definite statement, but thought he was justified in saying that we were within measurable distance of its achievement, and hoped at some future time to lay the results of his work before them.

The Neuron and the Chrome Silver Method.

Dr. N. D. Gunn showed several photographs of ganglion and neuroglia cells, stained according to the Andriezen method.

The general conformation of the cells was then taken up, and the protoplasmic and axis-cylinder processes described, according to latest researches by Cajal, Forel and others. The independence of each cell was then dwelt upon, showing that there was no anastomosis between the various cells, as was taught by Gerlach. He claims that protoplasmic processes or dendrites possess a well marked nervous function and are not merely aids to cell-metabolism, as seemed proven by the experiments of certain French authorities; for there are nerve cells which are adendritic and others whose axis-cylinders have not yet been demonstrated. The collateral fibrils of axon were then shown to possess great anatomical interest as being concerned in the grouping of cells into centres and areas. Hill's work upon the chrome silver method was referred to, and many of the theories held as regards the methods were shown to be either erroneous or not proven.

The beautiful pictures produced by this stain have not yet clearly established the anatomical basis as a true index to the physiological significance of the parts of the neuron. However, there can be no doubt that this method has established many facts, not the least being that contact and not continuity is the controlling idea of the cell structure of the brain and cord.

Stated Meeting, April 1st, 1898.

Robert Craik, M.D., President, in the Chair.

Drs. A. D. Aubry, E. R. Brown, and Gustave Lewis, of Montreal, were elected ordinary members.

Cardiac Embolism.

Dr. Wyatt Johnston showed a specimen where degeneration of the heart muscle involving the half wall of the left ventricle due to embolism of the coronary artery was the cause of sudden death. The affected area of the myocardium showed subendocardial ecchymosis and was of a greyish yellow colour. Microscopically, fibres showed granular and fatty degeneration, and the nuclei did not stain well. The source of the embolus proved to be a small thrombosis in the left auriclar appendix from which a portion had become detached and lodged in the left coronary artery bifurcation. Suspicions of poisoning had arisen in this case owing to the patient having suffered from vomiting, diarrhœa and weakness for several days before death. The presence of tænia in the ileum was perhaps the explanation of the gastro intestinal symptoms and the congestion and catarrh of the stomach and intestines which was found post-mortem. No analysis was ordered by the jury, as the actual cause of death could not have originated through poisoning.

A Case of Laryngectomy.

Dr. James Bell presented a patient from whom he had removed the larnyx for epithelioma, and gave the following history: G. P., æt. 65, was quite well until September, 1897, when he contracted a "cold," from which he soon recovered, but some soreness of the throat persisted in spite of sprays and other local treatment. In November his voice first became distinctly husky. In January his throat was examined, and a small warty projection removed and examined, and found to be epithelioma. A preliminary low tracheotomy was done on the 7th of February, and on the 16th of February the whole larynx, including the epiglottis and the cricord cortilage, was removed. A Hahn's tampon canula was employed during the operation, and replaced next day by an ordinary silver tracheotomy tube. The stump of the trachea was drawn well forward and attached to the skin all around and packed with iodoform gauze to protect the air passages from wound and pharyngeal secretions. The transverse incision was sutured, with the exception of an opening at either end, through which the pharyngeal portion of the wound was packed with iodoform gauze, as was also the vertical wound, which was left unsutured A large, soft rubber catheter was fixed into the œsophagus by suture, and at the end of twenty hours the patient was fed through this tube for the first time. He was fed regularly through this tube for 48 hours, when it was removed, and from that time he was fed regularly and without difficulty by introducing a stomach tube into the œsophagus through the mouth. There was no vomiting and he always enjoyed his food. The wound packing was changed daily and no secretion ever entered the trachea. On the 21st, five days after operation, a mild delirium of a jocular character developed and increased, with considerable restlessness at night, until, on the 23rd, iodoform was completely abandoned and chinosol gauze used in its stead. The delirium immediately began to grow less, and in three days, February 26th, he was quite rational again. In the meantime all the skin union had given way and the flaps were held only by the sutures.

On the 27th he had a very restless night. Complained of itching over the body and arms, and the pulse and temperature, which had throughout been practically normal, rose a little.

On the 2nd of March he began, in the very early morning, to perspire freely and to complain of weakness. The pulse was rapidt 120, and he felt miserable. Nothing could be discovered to account for the change in his condition, and he was given a dose of cascara, followed by an enema, which brought away a dark stool with some black fluid, about midnight. He felt better and slept for five or six hours after this. About noon, on the 3rd of March, he began to complain of some discomfort in the lower part of the abdomen, and his midday meal was omitted. Between 3 and 5 o'clock in the afternoon he had three most alarming syncopal attacks, the cause of which was explained during his third attack by an involuntary evacuation of a very large quantity of dark clotted blood. From this time he began to rally, and he has had no further trouble since. This is undoubtedly the history of iodoform toxication,—at least up to the attack of intestinal hæmorrhage, which I see no other explanation for. I could not, at first, believe that the mere packing of a moderate sized wound for a few days with iodoform gauze could produce this result, but the fact remains that the symptoms promptly subsided when the iodoform was abandoned. It must also be borne in mind that probably much of the iodoform was swallowed with the saliva. The subsequent history of the case has been uneventful. On the 19th of March the edges of the skin wound were pared and sutured, and union took place without difficulty. On account of the gaping pharyngeal wound no food was given, except by stomach tube, until the 25th of March, when he took solid food without difficulty, and in a day or two liquids were also swallowed with ease. Before the pharyngeal wound was resutured, the action of the œsophagus in swallowing the saliva could be observed through the wound He is now practically perfectly well.

The larynx, when removed, was examined by Dr. Bradley, who described it as follows:

The free surface of the epiglottis, near its root, is occupied by a roughened, rather nodular ulcerated surface, with somewhat undermined edges; the extent of the ulceration is 4 cm. in a vertical direction by 3.5 cm. transversely. There is an absence of induration about the periphery of the affected area. Both false vocal cords are involved by lateral extension, the right being completely ulcerated through at about its centre, exposing both ventricle and saccule; the left is not so deeply affected, the epithelium alone being eroded. The left true cord is unaffected; the right shows a loss of epithelium over an extent of 15 mm. transversely by 5 mm. vertically.

The disease had not extended beyond the larynx in any direction, and there was no lymphatic involvement.

Dr. Bell referred briefly to the recent literature of the subject, especially to a paper read by Dr. Graf, of Berlin, before the German Surgical Association in April, 1897. This paper was based upon the experience of Prof. Von. Bergmann, of 20 total extirpations and 28 partial resections of the larynx for malignant disease.

Removal of a Fibroid Tumour at the Second Month of Pregnancy.

Dr. Lapthorn Smith reported a case of removal of a fibroid tumour from the pregnant uterus, by myomectomy, without causing a miscarriage. He also showed the tumour, a nodular one, larger than an orange and very dense. The patient was 25 years of age and had been married six months. Three months after marriage she had a miscarriage, but became pregnant again immediately, for she had no flow since the 10th January, when it stopped. About middle of March she began to suffer severe pain in the right side, and she noticed a lump pressing forward the abdominal wall in right lumbar region. When seen by Dr. Lapthorn Smith, in consultation with her family physician, he found her about 2½ months pregnant, with a nodular subperitoneal fibroid attached to right corner of uterus. As it was growing rapidly and was not only painful, but affecting the *morale* of the patient, he advised early operation which was performed on the 1st April. The tumour was larger than the pregnant uterus, so that the abdominal incision which permitted the tumour to be extracted, also permitted the uterus to be lifted out, thus enabling him to remove the tumor and to close up the hole in the uterus very deliberately. Clamps were applied to the uterine wall, and thus the operation was almost a bloodless one, although the hole, two inches long, had to have two rows of Lembert sutures before the clamps could be taken off, and then a third row had to be applied to completely stop the oozing. She made a splendid recovery, hardly requiring any anodyne, and there has not been the slightest attempt at a miscarriage. As far as he was aware this was the only case of the kind ever reported in Canada.

Malignant Endocarditis.

Dr. H. A. Lafleur read the report of this case.

Intestinal Obstruction by Meckel's Diverticulum.

Dr. James Bell read the following report of a case of intestinal obstruction by Meckel's diverticulum, and presented the specimen:

H. P., æt. 16, a well-developed and well-nourished girl, was brought to the Royal Victoria Hospital from the country, at 10 o'clock on the evening of Friday, March 18th, with well-marked symptoms of intestinal obstruction, and operated upon two hours later. She had always enjoyed good health, with the exception of occasional attacks of pain in the abdomen and vomiting, sometimes accompanied by headaches. These were called bilious attacks, and she had suffered from them "all her life." She had had a long walk on the previous Monday, and was quite well Tuesday, but began to have general abdominal pain on Tuesday evening, which kept her awake most of the night. She got up on Wednesday morning and vomited, for the first time, immediately after breakfast, about 7 a.m. The vomiting continued from this time till admission, and about 10 a.m. Friday, it was first noticed to be distinctly fæcal. The bowels

were moved early on Wednesday morning, but neither flatus nor fæces was passed afterwards. On Thursday afternoon the temperature was 99.2° and on Friday morning 101.3°. On admission it was 102°, and the pulse, 112. Distension was first noticed on Friday morning, and on admission it was quite marked, but limited to the central region of the abdomen. These facts pointed very clearly to a complete obstruction, low down in the small intestines, probably of a mechanical nature, and, from the history, probably due to some congenital condition, suggesting a Meckel's diverticulum as the cause. On opening the abdomen, in the middle line a cord-like structure was found attached to the right of the umbilicus, which, on being withdrawn, was found to be a Meckel's diverticulum. The cord-like portion was cut off between ligatures and the point of obstruction was found in the ileum, about an inch above the ileo-cæcal valve. There was a deep furrow in the wall of the intestine, where the construction had been applied, which was suggestive of long continued presence. The diverticulum was attached close to the mesenteric border of the small intestine, at least three feet from the ileo-cæcal valve. The exact site was not determined, but at least two feet of the ileum was withdrawn and the attachment was still considerably higher up. It was cut off close to its attachments where it was about three-quarters of an inch in diameter, sutured and inverted into the lumen of the bowel by Lembert sutures. There was a free evacuation of the bowels a couple of hours after operation and the patient's progress has been entirely satisfactory.

Meckel's diverticulum is frequently met with and is a very common cause of obstruction, especially in children and young people. In 3,400 post mortem examinations in St. Bartholomew's Hospital it was found 27 times (Sajous). It arises nearly always within two feet of the ileo-cæcal valve and produces obstruction in many different ways, depending upon the point of attachment of its extremity. Its extremity is often free.

Intussusception.

Dr. F. R. England read the report of this case.

Empyæma of the Maxillary Antrum.

Dr. H. D. Hamilton read a paper on this subject.

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Editorial.

COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

The approaching triennial meeting which takes place on the 13th of July next, at Laval University, St. Denis street, Montreal, will undoubtedly be one of the most interesting gatherings of the members of the Medical Profession in this Province which has ever been held, when the second important step will be taken in the movement for the abolishment of the proxy system which has been so lamentably abused during the last decade. The election of a board pledged to carry out this general decision of the profession is the object of the opposition and labour of the English and French Electoral Committees. The progress made in securing supporters and proxies were fully reported at a recent meeting held in the rooms of the Monument National, at which there were present nearly two hundred medical men from the City of Montreal and suburbs. Dr. Leprohon was called to the chair, and Drs. Benoit and Elder acted as secretaries. Dr. Lachapelle was called upon to report the progress made among the French members. He first referred to the state of affairs which led to the present movement, and which necessitated a combined movement to rectify a state of affairs which permitted of an individual commanding

the majority vote of the members. There were three committees, two French, one in Montreal, the other in Quebec, and one English committee in Montreal, representing the entire English vote of the Province.

He stated that there were fourteen hundred and three registered practitioners in the Province. Of this number the committees had already received the proxies of eight hundred and five, so that they had now a large majority even if every member voted, but through indifference and other circumstances there would likely be one to two hundred who would not be heard from at all.

An argument frequently used by those at present in power was that by withdrawing the proxy system three-fourths of the voters would be disfranchised. But if voting by ballot paper was adopted and the ballots could be sent by mail, a larger number would be enabled to vote than by the present system, and it had appeared on looking over the records that at no time were there even three hundred votes recorded at any meeting in the past, and in Ontario where the ballot system is in vogue, often 90 to 100 per cent. of the votes have been cast when exceptional interest was attached to the election. The objects aimed at by the present campaign were chiefly as follows: To elect a board pledged to abolish the proxy and arrange a system of voting by districts; to institute radical reforms in the management of the financial department of the College; to more carefully guard the conferring of the license so that none but those duly qualified by professional attainments may receive it; to carry out a more rigid surveillance in regard to those illegally practising medicine.

Dr. Lachapelle is also of the opinion that the registrar should be non-partizan and not a member of the board, as the advantage of this position towards the party with which the registrar was identified was such that a neutral incumbent would be advisable.

Dr. Armstrong then addressed the English members of the meeting, covering much the same ground as the previous speaker. He urged also a large attendance at the meeting and prompt presence at the opening hour, as matters of the greatest importance will depend on a large personal vote at

the meeting, the proxies being available only for the election of governors. Candidates for the city were then selected by ballot, each nationality choosing its own representative. Montreal was entitled to twelve members on the board, two were elected by each of the three medical colleges in the city, and six by the profession generally. It was thought that as there were two English colleges, five of the six to be elected by a general vote should be of French nationality and one English, thus making the proportion of seven French and five English.

Dr. John A. MacDonald was unanimously elected as the English-speaking candidate, and the following were chosen as the candidates of the French portion of the profession in Montreal, Drs. Cleroux, Marsolais, Desroches, Girard and Baril.

As it seems more than probable that the next board will be almost entirely a new one, we may hope to secure not only the reform chiefly aimed at, but that the entire working of this important body may be in conformity with the most advanced ideas prevailing in regard to what is for the best interests of the profession generally. Each university and those not connected with the teaching bodies should be fairly represented in all the appointments and no undue preponderance allowed to any section. In this way only can true harmony prevail and hearty co-operation be secured for the true interests of the members of our profession as individuals and as a whole.

CANADIAN MEDICAL ASSOCIATION.

The Thirty-first Annual Meeting of the Canadian Medical Association will be held in Laval University, at Quebec, on August 17th, 18th, and 19th next.

There will be the usual *fare and a third* rate on the certificate plan, both by Steamboat and Railway lines. There will also be arrangements made so that members and their families may take side trips at a trifling cost.

The Secretary, Dr. F. N. G. Starr, and the President, Dr. J. M. Beausoleil, are making every effort to make this a successful meeting, and while a number of interesting papers are already promised, members throughout the Dominion are requested to read papers and send the title to the secretary before July

20th next. The many interesting points at and near Quebec which are the delight of the tourist should bring a large number of our *confrères* to this meeting. We are in receipt of the following communication from the Secretary :

SIR :—There is no m an so deserving of a holiday as the hard working physician who has had his nose to the grindstone from early morning t ill late at night. It is not only a privilege but a duty to relax one's energeies at least once a year and take an outing. Having ma de up one's mind to go away for a bit, the next qu estion is where to go, for one likes to gain some mental profit as well as physical vigor. This year the Canadian Medical Association offers peculiar inducements to the busy man by meeting in the historic old city of Quebec on August 17, 18 and 19 next. This will give to the physicians all over the Dominion an opportunity to visit at a trifling ex pense one of the most picturesque parts of Canada. It, too, will enable the English and the French to become better acquainted, thus helping to bring about a more thorough understanding.

The President, Dr. J. M. Beausoleil of Montreal, is putting forth every effort to make the meeting a success. The local committee of arrangements under the chairmanship of the Vice-President, Dr. C. S. Parke, ably assisted by the Local Secretary, Dr. A. Marois, are doing good work toward making the visit of their medical bret hren enjoyable. It has been whispered that a trip to Grosse Isle is a probable part of the entertainment. The office rs of the Association are confidently looking forward to a large and enthusiastic gathering. For particulars address

F. N. G. STARR,
471 College St., Toronto.

At the Denver meeting of the American Medical Association Dr. Casey Wood, of Chicago, was elected Chairman and Dr. C. H. Williams, of Boston, Secretary of the ophthalmological section.

The twelfth annual class for instruction in orificial surgery will assemble in Chicago at 9 a.m., Monday, September 5, 1898, and will continue to meet daily during the week, as usual. For particulars of this clinical course address

E. H. Pratt, M.D.,
100 State St., Chicago.

Book Reviews.

A Compendium of Insanity. By John B. Chapin, M.D., LL.D., Physician in Chief Pennsylvania Hospital for the Insane; late Physician Superintendent of Willard State Hospital, New York; Honorary Member of the Medico-Psychological Society of Great Britain and of the Society of Mental Medicine, Belgium, etc. Illustrated. $1.25. W. B. Saunders, 925 Walnut St., Philadelphia, Pa. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

The subject of insanity to the ordinary physician who has given it but little attention seems difficult and of the nature of intangible psychological ill-defined conditions, to comprehend which requires a broad and extensive study,and which, owing to its great scope, he is prone to avoid. The compend before us is just such a work as is required to be circulated freely among the general practitioners of the country in order to dispel the proneness to look to specialists for advice when cases have become well defined—rather than to have recognized the true condition in its incipiency—as is the lot of most cases of insanity.

The 227 pages give in a concise form all the essential features of the different forms of mental derangement,written by a specialist of renown, who from the vast literature of the subject has given us the clinical features and practical directions for the care of the insane in a style which is easy of comprehension, but still sufficiently brief to give a clear conception of the different varieties of abnormal mental conditions. It is adapted for the use of the general practitioner, the medical student and for the legal profession, and is so devoid of technical language as to be readily comprehended by the lay reader as well. A number of photogravures illustrating the faces of different forms of insanity will be very useful in aiding the non-expert in making a diagnosis. This useful volume is deserving of a wide circulation.

The Surgical Complications and Sequels of Typhoid Fever. By William W. Keen, M.D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery Jefferson Medical College, Philadelphia; Vice-President of the College of Physicians, Philadelphia; etc. Based upon tables of 1,700 cases compiled by the author and by Thompson S. Westcott, M.D., Instructor in Diseases of Children, University of Pennsylvania, with a chapter on the Ocular Complications of Typhoid Fever by George E. De Schweinitz, A.M., M.D., Prof. of Ophthalmology Jefferson Medical College, and an appendix, the Toner Lecture No. V. W. B. Saunders, 925 Walnut St., Philadelphia. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

This interesting monograph is the result of the revision and extension of two lectures given by Dr. White, on the fifth Toner lecture delivered on Feb. 17, 1876, on the surgical complications and sequels of the continued fevers and the Shattuck lecture on June 9, 1896. Dr. Westcott tabulated all the cases between 1876 and 1896, and other cases bringing the subject of the present years have been added. 1,700 cases in all are recorded which represent nearly all on record during the past 50 years. The importance of the subject is evident when we learn that in fatal cases only 24 per cent. are the result of the typhoid infection, 76 per cent. being due to various medical and surgical complications and sequels. The importance of the discovery of the typhoid bacillus by Eberth in 1880 is dwelt upon, and the necessity of making bacteriological examinations in all cases from the usual sites and the complicating lesions. A very interesting chapter is that on the pathology of the surgical complications and sequels, in which points are considered which are not yet incorporated in the ordinary text books on medicine. In this chapter are considered the viability of the typhoid bacilli both in and out of the body, and therefore the possibility of their causing late as well as early sequels of the fever.

Their widespread diffusion in the various organs of the human body, and therefore the possibility if not the probability that all the various surgical results may be caused by them.

Mixed infections of the typhoid bacilli with other bacteria.

The pyogenic faculty of the typhoid bacilli.

Typhoid infection of different organs without typical typhoid lesions in the intestines.

Each of these subjects are fully considered and all the most recent literature on the subject drawn upon. Then follow chapters on typhoid gangrene, typhoid affections of the joints, bones, typhoid abscesses and hæmatomata, cerebral complications of typhoid fever, otitis media and parotitis, typhoid affections of the thyroid gland, larynx, pleura, lungs and heart, œsophagus, stomach, intestinal perforation, affections of the liver, gall bladder, spleen and sexual organs, specific mixed affections in typhoid fever. The chapter on the ocular complications is written by Dr. Geo. E. De Schweinitz, who first refers to post-febrile complications, in general, and thus very fully covers the ground of those due to typhoid fever. The conclusions are given in a special chapter and are exceedingly interesting and instructive. The Toner lecture is given in an appendix.

This is a valuable addition to the literature of typhoid fever, containing most useful information on the latest results of study in regard to this affection which will be invaluable to the teacher, pathologist and general practitioner.

International Clinics. A quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on treatment, by Professors and Lecturers in the leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and

Canada. Edited by Judson Daland, M.D., Philadelphia; J. Mitchell Bruce, M.D., F.R.C.P., London, England; David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland. Volume IV., seventh series, 1898, and volume I., eighth series, 1898. J. B. Lippincott Co., Philadelphia. Dominion Agent, Charles Roberts, 593a Cadieux St., Montreal.

The present volume is replete with useful and well written articles in each of the subjects indicated as the scope of this work on the title page. The perusal of one of these quarterly numbers is equivalent to a post-graduate course to the general practitioner. Being mostly clinical lectures given by eminent teachers they are not cumbrous essays, but interesting pointed articles representing the most recent views in regard to the subject under consideration. The articles are not only of extreme interest to physicians, but may, in spare moments, prove useful and suggestive to the final student.

Among the more interesting articles in this volume: A New Departure in Therapeutics, by Robert Bartholous, M.D., LL.D. Poisons and their Treatment, by Herman D. Marcus, M.D.

Volume I. of the eighth series is also to hand with some forty articles from the pens of leading teachers. Among the most interesting are the lectures on Contraindications to the use of the Salicylate of Sodium in the visceral manifestations of Acute Inflammatory Rheumatism, by Professor Jaccoud, of Paris; The Treatment of Whooping Cough by Prof. Marfan; Placenta Praevia, its dangers and treatment, by J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S.E.; The Treatment of Chlorosis, by Prof. Hazen; Myocarditis, by Prof. E. Von Leyden; Aneurism of the Abdominal Aorta, by I. N. Love, M.D.; Spinal Irritations, by T. McCall Anderson, M.D., and articles by H. C. Coe, Paul F. Mundé, M. O. Roberts, E. Fletcher Ingalls, Byron Bramwell, N. S. Davis, jun., etc.

An American Text-book of Genito-urinary Diseases, Syphilis and Diseases of the Skin. Edited by L. Bolton Bangs, M.D., and W. A. Hardaway, A.M., M.D. W. B. Saunders, publisher, Philadelphia. Price cloth $8.00, sheep or ½ morocco $9.00, by subscription.

This elegant work of 1,200 pages with 300 engravings and 20 full-page colored plates is a powerful demonstration of the greater practicability of a work compiled by many carefully chosen authorities over a publication by a single author, talented and widely experienced though he may be. The illustrations, printing and binding are most excellent, and the scope of the work is such as to include the essentials of these 3 subjects in the one compact volume instead of 3 irregular volumes. The first chapter deals with urinary analysis and the consideration of urine in surgical diseases of the urinary tract. Under the heading of sediments in the urine the clinical significance of Prostatic, Vesicular and Seminal Secretions appearing in the urine is discussed. The chapter on the diseases of the ureter illustrates the great advance in the surgery of the ureter during the last few years. Some of the best illustrations here are copied from Kelly's magnificent work in this department of surgery. The section on Syphilis is freely illus-

trated with life-like plates showing the various lesions so essential to positively recognise in diagnosis.

The sections on skin diseases are very complete yet terse, and are supplemented by many original engravings and plates.

Of the many works on these subjects it would be hard to select any 3 or 4 books which would cover the subjects as completely as this volume does. For this reason it is to be strongly recommended to the student as well as to the practitioner. As a reference work it is also very complete, containing as it does a copious Bibliography of recent writings on each subject which is inserted after each section.

It is quite evident that the book will recommend itself to the profession, and that a large circulation will repay the editors and publishers, in a measure, for their conscientious work.

Brief Essays on Orthopaedic Surgery. By Newton M. Shaffer, M.D. D. Appleton & Co., publishers.

This small volume of 81 pages consists of a number of essays which the author has from time to time written on the present status and scope of orthopædic surgery and its relation to general surgery. He points out that the great improvement in mechanico-therapy, during the last few years, is due to those who have selected this department of surgery and have so thoroughly pursued it under the advantages offered in the Orthopædic Dispensaries in New York and Philadelphia. While these essays illustrate very nicely the various stages of this well-recognised specialty during its evolution, the author has not included any chapter on orthopædic surgery itself, which is to be much regretted, as the words of a master are ever too few.

PUBLISHERS' DEPARTMENT.

IN HONOR OF THE PRESIDENT.

President McKinley is to be given the unique distinction of having a number of a woman's magazine named for him and prepared in his honor. The July issue of *The Ladies' Home Journal* is to be called "The President's number." It will show the President on horseback on the cover, with the President's new "fighting flag" flying over him; a new march by Victor Herbert is called "The President's March"; the State Department has allowed the magazine to make a direct photograph of the original parchment of the Declaration of Independence, while the President's own friends and intimates have combined to tell some twenty new and unpublished stories and anecdotes about him which will show him in a manner not before done. The cover will be printed in the National colors.

SAMMETTO IN CYSTITIS, PROSTATITIS AND IRRITABLE BLADDER.

I have been using Sammetto in my practice for two or three years. I have used it in a good many cases of cystitis, prostatitis, and in all cases of irritable bladder, with the most gratifying results.

R. T. HOCKER, M.D.,
Ex. Pres't. So. Western Ky. Med. Assoc.

ARLINGTON, Ky.

CANADA
MEDICAL RECORD

JUNE, 1898.

Original Communications.

GYNÆCOLOGICAL NOTES FROM PARIS.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. Eng., Montreal, Canada.

Apostoli. As chance would have it, I found myself first at the Clinic of Apostoli, who has attained such world-wide celebrity by his successful application of electricity to gynæcological therapeutics. Although his office is still at 5 Rue Moliere, near the Avenue de l'Opera, he has removed his clinic from its former dingy surroundings in the Rue du Jour to a much larger and more suitable place at 15 Rue Montmartre. Since my last visit here, twelve years ago, his views have changed but little. Most of what I wrote in my letters from Paris at that time is still true. I was greatly interested to see his splendid outfit of instruments and apparatus, and the honest and painstaking manner in which the records of his cases are kept, and I could not but be impressed each time that I visited his magnificent waiting rooms by seeing them filled with the highest class of patients from so many different countries. His method must have some virtue in it to have stood the test of so many years. At his clinic he has three salaried assistants constantly taking histories and giving treatment, so that now he has more than five thousand cases, all carefully, and many of them most minutely recorded, His clinic costs him personally over three thousand dollars a year. Although he still uses the constant Galvanic current for the symptomatic cure of fibroids and the Fine Faradic current for pelvic pain, he has added two other important elements to his installation: one the static current, obtained from a

Holtz machine, and the other the Tesla current, of very high tension and high frequency. The static is given in the form of showers or sparks, while the Tesla current is applied as the patient is reclining on a sofa or sitting within a solenoid or cage, the current passing all around him. Want of space prevents me from describing these currents more fully, so I must be content with a summary of my observations.

1st. Apostoli does not treat surgical cases with electricity. Each time that I attended his clinic, I saw case after case sent to the surgeon, because these cases had either disease of the appendages or cancer of the uterus, neither of which he claims to cure by electricity. He wishes it to be distinctly understood, therefore, that electricity is an ally and not a rival of surgical treatment.

2nd. If I had any doubt, which I have not, as to the great value of electricity as a diagnostic agent in gynæcology. it would have been dissipated by what I saw at Apostoli's clinic. As the cases were brought before him, the assistants reported that in several of them there was intolerance of even small doses of 40 or 50 milliamperes. Apostoli invited me to investigate them carefully with him, and by the aid of the clinical history and the physical examination I would have suspected diseased appendages in some and cancer in others. With the intolerance of electricity added, Apostoli felt so certain of the diagnosis that he then and there sent them to the surgeon for operation. He was much interested in a case of my own, bearing upon the diagnostic value of electricity. A young woman who had been treated by three physicians with electricity for a large fibroid tumor of the uterus, was rendered worse each time. Guided by Apostoli's advice I suspected pus tubes, and on performing laparotomy I found that what was thonght to be a fibroid was a collection of four enormous absce-ses of the two tubes and ovaries.

3rd. I saw demonstrated the important place occupied by the electrical treatment of ovarian pain, for which, so far, neither medicine nor surgery have proven very effective. And yet no other word than magical would express the effect of the *static* spark on tender ovaries. Cases which could not endure firm pressure on the ovarian region without crying out, declared after two or three minutes of application of the static sparks,

that the same pressure caused them no discomfort whatever. Some of these patients were seen for the first time while I was there and did not leave my sight for a moment, nor was a word spoken to them until the effect was produced, so that they did not know what was being done, nor what was the effect expected. I cannot say how long the relief lasted, but Apostoli assured me that many cases, even including those suffering from ovarian pain after removal of the ovaries, had been completely cured by the treatment, which he tells me, has taken the place of the current from the long fine faradic coil.

Pozzi, with whom I had the pleasure of spending a morning at the Broca hospital, is one of the most striking figures of the profession in Paris. Like our own Sir William Hingston, he is a Senator and a Knight (of the Legion of Honor), and he is also a full professor of the University. He is a tremendous worker, his book on Gynæcology being one of the most complete that has ever appeared. I was always puzzled to know how he managed to find the time to write such a work, and on expressing my curiosity, he told me that he obtained leave of absence from the University and from the Hospital, and, taking many cases of notebooks and monographs with him, went to Montpellier, where he shut himself up like a hermit for two years, writing for fifteen hours a day. I saw him do an abdominal hysterectomy, during which, in order to give himself more room to work, he first split open the fundus and enucleated a large hard fibroid, by screwing a specially made corkscrew into it. The remainder of the operation was exceedingly simple, because, relieved of its load, the uterus was easily lifted out, including the cervix, and the six arteries ligatured individually with catgut, and the peritoneum closed. As far as I could learn, vaginal hysterectomy is gradually being abandoned in France, where it had its greatest stronghold, and Howard Kelly's method of abdominal hysterectomy is gradually taking its place. Pozzi is getting the City Council of Paris to build a one hundred thousand dollar operating theatre and laparotomy pavilion. It will be without wood, marble and cement throughout, so that each day it may be washed with a stream of bichloride solution with the hose.

Segond is next in seniority to Pozzi, and is about forty-eight years of age. He is a man of great force of character and is making a marked impression on the progress of gynæcology in France. He was a strong advocate of vaginal morcellement of the uterus for pus tubes, fibroid tumours and all conditions in which both tubes and ovaries had to be removed. While visiting America a year ago, he performed this operation eleven times before large assemblages of gynæcologists, and he did them so elegantly and quickly that he elicited the admiration of all who saw him operate. But though he came to show American surgeons what could be done with vaginal hysterectomy, they in turn showed him what they could do by the abdominal method, with the result Segond became converted by those whom he came to convert, and ever since his return he has become so strong in his advocacy of Kelly's method as to carry all before him. They all, however, still remove the cervix, even when there is no suspicion of malignancy, their sole object being to obtain vaginal drainage, which they think was the strong point leading to their great success in the vaginal method. In this I think they are mistaken, as it adds very much to the time required for the operation, several whom I saw doing it taking more time to arrest the vaginal hæmorrhage than was required for the ligature of the six arteries and the removal of the tumor. Moreover, I think it important to leave the *healthy* cervix, to avoid shortening of the vagina, and as a rule there is so little to drain that it hardly justifies the opening of the vagina. Segond is a great admirer of everything American, and he told the large staff present that the finest hospital he had ever seen was the Royal Victoria at Montreal, and in his writings, which are very forcible and convincing in their style, he loses no opportunity of praising the skill of American gynæcologists. I saw him doing an abdominal hysterectomy for cancer of the uterus, in which he also removed the upper part of the vagina, which was affected; he had great difficulty in stopping the bleeding. He admitted, on my inquiring, that his experience with hysterectomy for cancer was very discouraging; so I suppose they have the same difficulty to contend with in France as we have, namely, the cases come to us too late. The above case was at the Salpetriere; the next one was at the Baudeloque,

where I saw him remove a papilloma of the ovary, with secondary grafts on the peritoneum and ascites. After removing the disease he placed a drainage tube and gauze packing on account of the profuse oozing. He recognized the fact that gauze packing keeps in secretions but does not drain them. The third case I saw Segond doing was at a private hospital kept by the nuns, where he removed one tube and ovary from a young lady; but he admitted that it did not give very satisfactory results, as he had often to operate them again later.

Richelot, as far as I could learn, comes next to Segond. I saw him operating at the St. Louis hospital, the dirtiest looking old barracks, internally, that I have ever seen. As this was probably not his fault, I felt very sorry for him. I called upon him at his elegant private house, 32 Rue Panthievre, and although he was crowded with patients, he received me most kindly, and made an appointment for the next day. Everything during the operation was rigorously aseptic, which, of course, is the principal thing; but any stranger seeing *only* that hospital would have a very bad opinion of French hospitals. I was glad that it happened to be a vaginal hysterectomy for disease of both appendages, pus tubes, for that is his forte. He performed the operation beautifully in about the same time as we would take to remove them by the abdomen. They claim here that the uterus should always be removed when both ovaries are taken away. I also saw him perform a Schroeder operation, using a needle on a handle to pass the sutures. He did not, like Martin of Berlin, pass a preliminary suture on each side to control hemorrhage. At all the hospitals the feet and legs of the patients are bandaged up in a thick layer of cotton well sterilized, an example worth following, as it helps to keep up the bodily temperature. To close the abdomen Segond uses through and through silver wire; Bonilly, through and through silk worm gut, and Pozzi three layers, two of buried catgut and one of superficial silk worm gut.

Doyen is said to be the equal of any, but he did not operate while I was in Paris.

Bonilly operates beautifully at the Cochin hospital. *Tuffier* is a rising man. My next letter will be from Berlin

Selected Article.

RÖNTGEN RAY AND ITS USEFULNESS.*

By FREDERICK PREISS, M.D., Buffalo, N.Y.

Lecturer in Electro-therapeutics.

To thoroughly familiarise yourself with the discovery of the Röntgen ray, I shall give you a summary of experiments which led up to this important event. Faraday invented the terms anode and cathode, which indicate the conductor terminals of a current of electricity. He also studied the effects of electrical discharges within tubes containing rarefied gases. Geissler improved these tubes and increased the degree of rarefication ; he also experimented with many kinds of gases noticing the beautiful effect of a number of them. It was also noted that these gases acted differently at the anodal and cathodal terminals within the tubes and that fluoresence was produced, which was the result of the cathode extremity. Following these experiments came the magnificent researches of Prof. Crookes, who, by his high vacuum tubes, demonstrated that electrified particles were projected in straight lines within the tubes from the cathode end producing a fluorescence of the glass, which was caused by the bombardment of these electrified particles.

Next came Hertz, who showed that the cathode rays possessed penetrable power within the tube, and his student, Lenard, discovered that the cathode rays possessed the same qualities outside the tube to about the distance of three inches from the tube, and that the ray would pass through certain substances easier than through more dense objects; he also showed that these shadows caused by the ray not passing through opaque substances might be impressed on a sensitive plate and developed in the usual art of photography. But to Prof. Rontgen is given the credit of producing similar effects at enormously long distance from the tube, he also being the first to bring the ray into practical use by having shadow-photographs taken of the bones of the human organism. Prof. Rontgen claimed that the rays from which these results were obtained were not those of his predecessors, and brought forth arguments to substantiate his claim, but arguments may be brought forward also in favor of the cathode ray being identical with the Rontgen ray, differing from it only in degree as regards severity or penetrable power. In my

* Read before the Buffalo Medical Union, February 23, 1898.

opinion the ray is cathodal, and is developed in any of the Crookes' or Geissler tubes by the passage of electricity through them, and the strength or penetrable power of the ray depends wholly upon two favorable conditions—namely, (1) a certain amount of electricity of high electromotive force; (2) the proper vacuum of the tube used. After many experiments I have come to the conclusion that the Hertz, Lenard and Rontgen ray are all one and the same, differing only in the degree of penetrable power, as above explained.

There has not been any discovery in any line of science which has caused as much world-wide interest as has Prof. William Conrad Rontgen's discovery of the properties of the penetrating light commonly called the X-ray. That name, in my opinion, is inappropriate for the following reasons—namely, in the first place the letter "X" is made use of in difficult problems to represent an unknown quantity, and that is why it has been made use of in this instance. Although the ray is somewhat obscure, still we know that it is a light and is produced by the passage of electricity of very high voltage through a glass tube which has been previously exhausted to 1-1,000,000 part of air; consequently, when we know the origin, development and properties, I am not in favor of having it represented by the letter "X", but am more in favor of calling it after the discoverer of its usefulness and who was instrumental in introducing it to be used in a practical way. This personage is Prof. Rontgen.

My object in this paper will be to give a concise description of a Rontgen ray apparatus and describe its usefulness, and, inasmuch as this subject is somewhat new and much experimentation is going on at the present time, I shall avoid, as far as possible, all unnecessary technical terms and theoretical discussions. Before advancing further on this subject I shall explain a few terms which I shall make use of:—

(*a*) A "volt" is a practical unit of electro-motor force; (*b*) an "amperé" is a practical unit of rate of speed; (*c*) the "cathode" is a name given to the negative pole terminal; (*d*) the "anode" is a name given to the positive pole terminal; (*e*) a "Leyden jar" is composed of glass and has a tin-foil coating inside and outside of the jar to about one-half its height; a cork stopper is used through which a brass rod runs, having a brass chain attached to its inner end, which touches the tin-foil, and a brass ball or ring attached to its outer end; the inner tin-foil is called the internal armature and the outer tin-foil is called the external armature; (*f*) high vacuum or high density is a name applied to the Crookes' tube when it requires great electromotor force to drive the electricity through the tube in order to give the best penetrable light;

(*g*) low vacuum or low density is a name applied to the Crookes' tube when less electromotor force is required to drive the electricity through the tube, and the consequent penetrating power of the ray is much less than that of the high vacuum tube; (*h*) the fluoroscope is an instrument of great importance to the operator of the Röntgen ray. This instrument was devised by Prof. Edison, and is composed of a pasteboard screen, covered with either fused tungstate of calcium or barium platino-cyanide set in a pyramidal box having this screen as the bottom. This screen serves to the operator the same as the lens does to the telescope manipulator. Prof. Edison has experimented with many different salts, but up to the present writing the barium platino-cyanide is by far the superior to any yet discovered for use in conjunction with the Rontgen ray. By the use of this instrument the operator is enabled to tell with what degree of perfection his tube is being excited and so aid him greatly in shadow-photography, or an examination may be made by the use of this instrument without the trouble or expense of having a shadow-photograph taken. It is a common practice of the operator of the Röntgen ray apparatus to test the penetrable power of his tube by looking through his hand and noticing the distinctness of the bony outline. I am much opposed to such a practice, as injurious effects may sooner or later develop if he uses the coil apparatus to a considerable extent. I should advise a metallic or other object to be placed in a book or box and to be looked at each time he operates, and soon his eye will become accustomed as to the clearness of the object when the tube is working to perfection. This method, as I advise, is equally instructive, and not at all injurious to the manipulator.

In the development of the Röntgen ray there are three main apparatuses used to excite the Crookes' tube—namely, (1) the static machine; (2) the induction coil; (3) the Tesla transformer.

In order to do Röntgen ray work from a static machine the size of the machine must first be taken into consideration. As a rule,an eight plate or more does the best work, although the ray can be obtained from as small a machine as a four plate, but not with any satisfactory results. There are three methods employed to excite the tube by a static machine; (*a*) the convective, (*b*) the interrupter spark gap, (*c*) the Leyden jar oscillating current. The only difference in all these methods is in the connection. A description of each is here given. (1) In the convective method, simply connect the tubes to the prime conductors and be sure that you have connected the anode of the static to the anode of the Crookes'

tube, and in commencing operation by this method have the spark-gap two inches between the sliding terminals, and gradually pull them apart beyond sparking space while the machine is in motion. It is customary to place large Leyden jars beneath the pole pieces of the static machine in the hope that better results may be obtained, the jars acting as condensers and having a tendency to reinforce the current ; but I have not noticed any material difference in such arrangements. (2) The Leyden jar oscillating current is attached by connecting the tube terminals with Leyden jars having not more than twelve square inches to the external or internal armatures ; otherwise, if larger jars are used, the condensation is so great and the consequent current reinforced to such an extent that injury may be done to the tubes. In commencing operation by this method, have the sliding poles close together, and gradually pull them apart beyond sparking capacity as the machine is being worked. In having the Leyden jars in a circuit, remember that by induction the current is changed —namely, the prime conductor giving positive electricity and entering the internal armature, as such is negative when it leaves the external armature ; therefore, for example, an anodal prime conductor of the static machine is attached to the cathodal end of the Crookes' tube, providing the Leyden jar is in the circuit between the static machine and the tube. (3) The interrupter spark-gap is connected in the following manner : having first noted the anodal and cathodal terminals and having placed the interrupters on the handles of the sliding rods, which have been pulled wide apart, connect the anodal interrupter to the anodal terminal of the tube and the cathodal interrupter to the cathodal terminal of the tube. In commencing operation with a machine connected in this manner, have the interruptions about one-eighth of an inch in space, and graduaily increase this space to about one inch at the positive and to one-half inch at the negative pole. Of course, this space of spark-gap will depend greatly upon the size and density of the tube. The Leyden jars may be in their proper position with the external rod extending high enough to be in contact with the post of the sliding terminal. In this position the jars are supposed to act as condensers and so increase the electromotor force of the current. This method of connecting I claim to be superior to the other two, for the following reasons :—(1) There is not as much waste of current, and consequently a greater amount passes through the tube ; (2) the interrupters give greater bombardment to the ray within the tube, and thereby greater penetration is produced.

The induction coil is the most convenient, especially if

the apparatus be taken to the bedside or clinic room. The first object which confronts the purchaser, however, is how large a coil should be bought? For all ordinary purposes a six to ten inch is sufficient; it also must be decided whether a direct or alternating current is to be used for the primary circuit or battery. I should recommend the direct current in the form of a movable battery. A necessary accessory to the coil is a vibrator or rotary interrupter; both work satisfactory, but a rotary interrupter run by a small motor is to be preferred, as more even interruptions are thereby obtained, which is conducive to better Röntgen ray production. A rheostat should be used to control the current supplied to the primary of the induction coil, as, if too strong a current be passed to the coil, it is very liable to be burnt out and consequently ruined. If the coil be immersed in oil it is not so easily short-circuited, and will give the purchaser more service.

Tesla Transformers.—Mr. Tesla has devised a coil which develops statical electricty, and may be attached to a direct or alternating current, and consequently may be connected to any of our electric light currents. Mr. Tesla claims that, with an ordinary incandescent lamp, his coil may be used in place of the ordinary static machine in the treatment of various diseases. Unfortunately, the coil is not manufactured at present, but Mr. Tesla informs me, however, it will be in the course of a few months. Such an apparatus would be very useful, as it could be carried very easily to the bedside or the clinic room, where electricity or a small battery is at our command without the slightest inconvenience, as the whole apparatus would not weigh over twenty pounds.

Many names have been given to the pictures taken in conjunction with the Röntgen ray. The following is a partial list: Cathode-photography, shadowgraphy, radiography cathography, photography, electrography, fluorography, skiagraphy and rontography. There are two methods whereby this picture is taken: (1) by putting the object which is to be shadow-photographed between the sensitive plate and the Crookes' tube; (2) by having a fluoroscopic screen and putting the object between this screen and the Crookes' tube, and then with a camera take the picture of the image or shadow which appears on the screen.

You will observe that in either case we do not get a photograph of the object itself, but a photograph of the shadow of the object is produced; therefore, I have designated the word shadow-photography, which is self-explaining, and is an appropriate word to use in conjunction with this part of the Röntgen ray work. In giving a description of shadow-photography the process is identical, whether a small or large

apparatus be used, or whether the shadow-photograph is to be that of a bone or that of a foreign body. Now, supposing the experimenter is ready to proceed. He takes the plate-holder containing the sensitive plate, the film side of which is turned upward, and fixes the object between the tube and the sensitive plate; everything being in readiness, the apparatus is made to work. The length of time required for the exposure depends upon the following conditions: (1) the penetrating power of the rays; (2) the amount of tissue or substance which the ray will be required to penetrate.

There are now on the market plates wrapped in black paper, and a plate-holder is not required. These plates will keep from four to six months without any deterioration as regards their sensitiveness. The experimenter must always remember that the Röntgen ray will destroy the sensitive plates; consequently these plates must be kept in an iron box or in an adjoining room having a partition made of other than carbonous material. Furthermore, the object to be shadow-photographed must be kept perfectly quiet, otherwise a fogging of the picture will result You are all familiar with what a photographer will say when you have a photograph taken—namely, keep quiet and do not move a muscle; so, in a shadow-photography, the object must be kept perfectly quiet. If the object be fastened to the sensitive plate it does not matter so much if both move slightly, but one must not move differently than the other. If you wish, for instance, to take a shadow-photograph of the hand, fasten the hand firmly to the plate by three or four bands of adhesive plaster. To the beginner, questions arise, (1) how far should the plate be kept from the tube? That depends upon the apparatus you have and the power of the ray, but, as a rule, very good results are obtained at about two to six inches from the tube. At this distance the picture will be the best as regards accuracy and fine definition. (2) How long must the sensitive plate be exposed? That depends upon two conditions: (*a*) The density of the tube, whether high or low; if the density be low, much time is required, and at its best the definition is poor and inaccurate; but, if the density be high, a much shorter time is requisite to obtain a perfect impression, a few seconds or even an instant of exposure to a perfect flash is worth more than minutes of the working of the ordinary tubes of low vacuum. (*b*) The object the ray has to penetrate, as, for example, under like conditions it will take double the time for the elbow than for the hand. There are a few suggestions I shall endeavor to make here in regard to the manipulation of the tube. To the experimentor it is of the utmost importance to have the tube working per-

fectly before the sensitive plate is exposed, and herein the fluoroscope is made use of, after you have turned on the apparatus; have a certain object to look through and see whether the tube is working at its best. If you accustom yourself to look at the same object each time, you will soon familiarise yourself as to how plain the object should appear when the tube is at its best, whereas if you use a different object each time you will have lost that advantage.

A word about the Crookes' tube. This tube is exhausted to 1-1,000,000 part of air, having at each end a platinum wire fused in the glass and ending externally in a loop to make attachments to the exciting apparatus. Internally these wires end differently; the one is attached to a dish, usually made of aluminum, which function is to concentrate the rays, and is called the cathodal extremity of the tube. It is always attached to the negative pole of the exciting apparatus, the other being attached to a reflector, and is usually made of the same material; its function is to reflect the rays, and is called the anodal extremity, and is always attached to the positive pole of the exciting apparatus. If these attachments be reversed, little or no penetrating ray will be detected outside the tube. If the vacuum of the tube be too high, heat the cathodal extremity slightly over a spirit lamp, taking care not to heat it too much at one point, as you are liable to break the tube by so doing. If the vacuum be too low, use the tube a while and the vacuum will gradually get better and the ray more penetrable. After the tube has been in use considerable and is not working perfect, reverse the connections a few minutes and the tube will again probably work to perfection; an impaired tube is also benefited by rest; but after a time the tube cannot be benefited by this means of repairing, and will have to be sent to the manufacturer for re-exhaustion. Many tubes are on the market, and it depends upon what kind of exciting apparatus it is to be used as regards which kinds of tubes are best suited for that particular outfit. In connecting the tube with the exciting apparatus I should recommend the connecting link to be made of fusible lead wire, as a more perfect connection can be made and consequently less injury done to the tube through manipulation while making the necessary attachments. Tubes are manufactured which contain a salt in an extension at one end of the tube. This salt can be heated from outside the extension and lower the vacuum if it be too high. This tube is commonly called a focusing tube.

Great has been the interest taken by all the educated human race in the achievements of the Rontgen ray, and the class that has been most interested is that of the medical

profession, who are ever eager to grasp at new remedies and appliances that may assist them in their efforts to relieve diseased, suffering humanity. Among the foremost revelations of the Rôntgen ray are those applied to normal anatomy, and the day is not far distant when a first-class Rontgen ray apparatus will, out of necessity, be among the paraphernalia of the dissecting laboratory of every foremost medical college and hospital of the universe. It might be argued that the student can study as well from an artificially arranged skeleton, but such is not the case, as no human hand can arrange the osseous structures to the same perfection as nature. By the Rôntgen ray shadow-photograph or by the use of the fluoroscope, the precise relations of the bones to each other may be determined when the body is in the erect position or in any of the various attitudes. Development may be studied with great advantage, as developing bone may be easily distinguished from that which has already developed; likewise, the comparative anatomist is furnished an opportunity to study the osseous structures of the lower animals.

In the dissecting room the anatomical relations of the blood-vessels may be accurately determined by injecting into the vessels of the cadaver a metallic or nonpenetrable substance, which will show by opaqueness the precise course and distribution of the arterial circulation; the feasibility of this method may also be applied to the various cavities and organs of the dead body. In the living subjects the dimensions of the stomach may be determined by having the patient swallow ferruginous pills, or, better still, a metallic ball attached to a string or flexible handle, and a shadow-photograph taken and the fluoroscope used while the patient is in certain positions. Irregularities and congenital deformities of the osseous structures may easily be determined; also the heart, liver and the kidneys may be outlined. To the surgeon the Rôntgen ray is as requisite as the mirror is to the laryngologist or the ophthalmoscope is to the oculist. In considering the diseases of the bony structures of the human organism, we find the ray indispensable in various pathological conditions, most of which I shall endeavor to bring before you. How often are we consulted when, owing to the extreme tenderness and extensive swelling, thereby causing inability to properly manipulate the disabled member, we are unable to accurately decide whether the case at hand is one of fracture, dislocation, a severe sprain with much laceration of the soft tissue, or perhaps all three; but now with the use of the Rôntgen ray we may very easily determine the exact nature of the existing disability and treat our patient with confidence and not with the fear of a possible malpractice

suit. If in case of fracture you manipulate the broken bones and apparently get them in proper position, but are still in doubt as to whether the ends of the bones are in perfect apposition, all that is requisite is to place your subject before the ray, and with the use of the fluoroscope you will be able to satisfy yourself whether or not they are now in their natural position. If the splints be carbonous, you may at intervals look through them and determine whether the bones are kept immovable and that healing is going on properly.

We find the ray also very useful in determining tubercular and cancerous disease of the bone, caries and necrosis, exostosis, floating cartilage of osseous formation and hypertrophy of bone ; in fact, any disease whatever which shows increase or loss of bony substance. Many times we are consulted for troublesome pains referable to the bony structures. So localised is the pain that the patient is strongly under the impression that the bone is affected. By the use of the ray you will be able to convince your patient that such is not the case, but that the symptoms complained of are those caused by a probable localised neuritis, and treat the patient accordingly. And so in a great many instances, where the patient imagines that something is wrong with the osseous structure, you have only to use the ray, which will aid in the diagnosis and also gain the confidence of the patient and so aid materially in your endeavor to relieve the existing troublesome condition.

It is also very important to diagnosticate whether anchylosis, caused by a fracture or disease, is due to fibrous or bony union, inasmuch as the former may be remedied with good success and the latter not. The ray, in passing through an anchylosed joint, due to fibrous union, will show a light space between the ends of the bones; if due to bony union this space will appear opaque. Consequently the surgeon is in a position to enlighten his patient on the probable result if operative procedure be performed in either case.

In dentistry the ray is occasionally made use of in detecting whether or not a fang of a tooth remains in the socket, even if it be covered with soft tissue. The surrounding bone is more penetrable than are the teeth, thereby distinguishing the alveoli from the teeth or fangs. The lost end of a broken drill may be located if the dentist unfortunately breaks his instrument while operating upon his patient ; also the central cavity of a tooth may be outlined so that diseased conditions within the tooth may be detected. The growth and development of the teeth may be studied before and after they begin to protrude above the gums. thereby greatly aiding in the diagnosis of certain obscure cases of convulsions occurring during infantile teething.

One of the first applications of the discovery of Prof. Röntgen was the detection of foreign objects in the human body. Many occasions we meet with cases where the patients have been injured by fire-arms, whether intentionally or otherwise, and no one knows better than the surgeon how difficult it is sometimes to locate the bullet, but with the use of the Röntgen ray the exact position may be manifested, and once the object being located there are three methods by which to proceed for its removal:

1. The surgeon may take a glance through the fluoroscope to see where the foreign body is located and mark the spot, then giving the fluoroscope to his assistant. He takes his knife or forceps, as the case may require, and operates; if necessary he may be directed by his assistant, who has the management of the fluoroscope and is watching the operation through it.

2. A shadow-photograph may be taken whereby the exact location of the foreign body is determined, and the operator, having the picture before him, can now very easily extract the object.

3. By the use of the fluorometer, which is by far the best method of exactly locating any foreign object. Not only does this apply to missiles sent by fire-arms, but to all substances which are nonpenetrable to the ray, such as needles, glass, pieces of steel, stone and the like. Then, again, we find important diagnosis made by the rays in abdominal concretions, such as stone in the kidney, bladder and liver. Also calcareous deposits may be detected in various parts of the body, such as in gouty and rheumatic affections.

Suppose you are consulted by a patient who has had articular rheumatism for many years, you will be unable in the majority of cases to say whether the swelling around the joint is all external to the periosteum, but by the use of the ray you may very easily determine enlargement of the osseous structure, and consequently be able to give a more satisfactory diagnosis and prognosis of the case at hand. Fibroid growths of large dimensions, whether simple or malignant, may be outlined. Pregnancy may be diagnosticated as soon as the fetal osseous structures become slightly nonpenetrable to the ray. Prior to four months' gestation it is almost useless to attempt diagnosis by the above means.

To the practicing physician the ray is not of such great importance as it is to the surgeon, but it may be made use of by him to determine consolidation of the lung, enlargement of the liver, enlargement of the kidney, enlargement of the uterus, displacement and enlargement of the heart,

and is useful in the diagnosis of disease by exclusion. In almost all other diseases the practicing physician will find the Röntgen ray of little service to him.

In the foregoing pages I have endeavored, to be best of my ability, to lay before you, in a concise way, the pathological and anatomical conditions wherein the use of the Röntgen ray is of great importance. Of course, I could cite many instances where I have found the ray of incalculable service. An example is here given:

January 8th a brother physician brought a patient of his to me for a Röntgen ray examination, with the following history: Pain more or less for six years since falling off a platform; at the time of the accident he alighted on both feet. At that time he was confined to the house for four days, after which he was out and about by the aid of a cane. Upon making a comparative shadow-photograph of both knees the bone of the injured leg, which was the lower end of the femur, was found to be half an inch wider in lateral diameter than the other; consequently, at the time of the accident the lower end of the femur must have been slightly cracked, and was never properly put together. He was informed at this examination that nothing could be done and was much disappointed, but was pleased to be enlightened as to the exact nature of the existing difficulty. Previous to this he had consulted many physicians without any relief or satisfaction. Now, under the circumstances it would have been impossible to have diagnosticated this condition by any other advisable method except the one I have described.

Another very important application of the Röntgen ray will be in connection with testimony in lawsuits. Up to this date only two cases are on record where the presiding judge allowed the above used as such, and in these cases it was used only as corroborative testimony. In all other cases the court did not allow such testimony as might be given by shadow-photography, but it will only be a matter of time when such evidence will be permissible. The main reason why shadow-photograph testimony is not at the present date always permitted is because most of the cases in the court at the present time are the result of injuries sustained before the ray was discovered, and consequently the defendant did not have the advantage of the use of this recent discovery.

I may say that the field of experimentation of Röntgen ray work is large. There is ample room to make use of the ray in other directions than it has been used up to the present time. It is an interesting and notable fact that a diamond can easily be distinguished from a paste or glass, as the latter will appear opaque while the former will not. It may also be used to detect flaws in metals or how much metal there is in certain ores. Who knows but that in a short time, by chemical or mechanical devices used in conjunction with the Röntgen ray, we will be able to differentiate between the cyst, hematoma or a collection of pus and the like.

A word here about the beneficial and curative effect of the Röntgen ray. Allow me to say that, in my opinion, it has not any such property whatever. Much experimentation has been carried on, but all without the slightest encouraging result, but, on the other hand, injurious effects may be procured by a constant or repeated exposure of a coil apparatus.

Cases have been cited of the falling out of the hair, erythematous sloughing, inflammation of the eyelids and skin generally, and falling off of the nails, but this injury, in my opinion, is not produced by the ray itself, but is produced by the subject being placed in too close proximity to the electric current, which current is of high voltage, and consequently the patient is subjected to some extent to the electro-galvanic burning, which manifests itself in and around the tube and its conductors. I have yet to witness a single case where the slightest injurious effects have been produced by the proper manipulation of the Röntgen ray apparatus; but, if operated by an imprudent or unskillful hand, occasionally considerable injury may be manifested. Pray, what is not injurious if carried to excess?

The ray itself appears to have very little, if any, action upon animal or vegetable organisms. Any action that does manifest itself is due to electric diffusion, which is the result of leakage from the tube and its conductors while the apparatus is being operated.—*Buffalo Medical Journal*, June, 1898.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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THE TREATMENT OF NEPHRITIS.

Acute nephritis is by no means so frequently met with as the more chronic inflammatory conditions which produce such disastrous results; yet it is sometimes seen either as the ingestion of irritant substances or of the presence of severe infections. Some persons have gone so far as to assert that acute nephritis may result from severe exposure. Whatever its causes may be, if it is of a severe character, a train of symptoms familiar to experienced clinicians assert themselves. There is a condition of malaise, with anorexia and perhaps

nausea and vomiting, while, if the condition of the kidneys be grave, these symptoms may be followed or supplanted by violent headache, followed by delirium, convulsions and coma, during which the heart will be found acting laboriously and the pulse will be of high tension. The urine will also be decreased in quantity and the patient may develop rather a typhoid appearance. This condition may last, if not so grave as to produce death early in its course, for several weeks, and at that time, unless the case has been badly treated or has been unusually severe, recovery takes place, or at least the patient becomes so improved in health as to consider himself well.

The most important thing to do for any patient who is suffering from mild or severe acute inflammation of the kidney is to insist upon absolute rest, the patient remaining in bed not only for the rest, but also in order that the surface of the body may be protected from draughts and colds. A liquid diet, consisting largely of milk, should be insisted upon, and this liquid diet has the additional advantage that it will tend to increase the quantity of urine and so help to wash from the kidneys the effete materials which it is the function of these organs to eliminate. On the other hand, it must not be forgotten that during the course of acute nephritis the kidneys are unable to eliminate as much fluid as they can do in health, and the too free administration of liquids under these circumstances may to some extent aid in increasing the tendency to dropsy. For this reason scantiness of the urine in acute nephritis is not to be considered as a very grave symptom, but, if it becomes exceedingly scanty and does not show evidences of being thoroughly laden with excrementitious matter, and if it seems probable that this failure of action on the part of the kidneys is due to congestion, it then becomes the physician's function to relieve that congestion by one or several measures. Dry cups or even wet cups may be applied over the lumbar region, provided that hot compresses applied to this area for an hour or two fail to relieve the congestion. Or, in other cases, it may be well to cause a flow of blood to the surface of the entire body by placing the patient in a hot wet pack.

As purgatives not only relieve congestion of the abdominal viscera directly, but also seem to indirectly stimulate the kidneys to increased secretion, probably by relieving engorgement, and as calomel is a purgative which is supposed to possess considerable diuretic power, this or some other more rapidly acting drug, such as the sulphate of magnesium, may be given, and this will also aid the body in eliminating poisons through the bowel. Should the arterial tension be great,

we are not to forget that, in the presence of acute inflammation with high arterial tension, aconite and chloral are valuable drugs which are best given in small doses rather frequently rather than in full doses far apart. Should evidences of cerebral congestion manifest themselves, it may be necessary to resort to hot foot-baths or to actual venesection, the patient being also purged by repeated small doses of Epsom salts. As the end of the period of acute inflammation is approached, the anemia, which has probably been gradually increasing, is to be combated by the use of iron and arsenic, though the latter drug is to be administered cautiously lest it irritate the kidney, and solid food may be employed in place of the liquid diet heretofore insisted upon. Oxygen inhalations are also useful to some of these cases. The greatest attention should also be paid to maintaining an active condition of the skin by frequently sponging it with alcohol, or, if the patient is strong enough, by frequent washings.

Where the condition of the kidneys is more chronic, or, in other words, subacute nephritis is present, the patient should be advised, if possible, to resort to a warm and equable climate, to clothe himself most carefully, to avoid wetting the feet, and to limit his diet both as to fluids and solids. The rule in regard to fluids should be that they should not exceed to any great extent the quantity of urine which is passed, although, of course, an amount of liquid over and above that which is passed must necessarily be swallowed to make up for that which is lost through the skin and lung. This is particularly necessary in patients who are suffering from dropsy, more or less well developed. Should the patient not be passing water freely, copious draughts of fluid may be given to him with the object of aiding his kidneys in getting rid of the quantity of urea which should normally be eliminated and which amounts approximately to about 500 grains. If the physician is properly cautious he will from time to time analyse the urine to determine whether the normal quantity of urea is being eliminated, and should it constantly fall below the normal he will know that there is danger of the development of uremia and cerebral symptoms, and arterial tension should be lowered and diuresis encouraged by the use of nitroglycerin. If the dropsy in any case is sufficiently severe to result in large effusions into the various visceral cavities, there is nothing left to do but to recognize the fact that the condition of the kidney is grave; that the prognosis is distinctly unfavorable, and the only measure for relief in addition to those named is the use of tapping for the purpose of drawing off the liquid. If, as occurs in some cases where the disease is advanced, arterial tension is depressed rather than

raised, digitalis in the form of the infusion, which contains more of the diuretic principle of the digitalis (digitonin) than alcoholic preparations of this drug, should be employed for the triple purpose of stimulating the heart, the arterial system, and increasing urinary flow.—*The Theurapeutic Gazette, April*, 1898.

THE BECHTEREW TREATMENT IN EPILEPSY.

De Cesare (*La Riforma Medica*, Aug. 13, 1897) records eight cases of epilepsy treated for a period of six weeks with a mixture of bromide of potassium codeine and adonis vernalis, given twice a day (Bechterew treatment). In four cases there was complete suspension of the fits ; in three cases the fits were replaced by infrequent attacks of vertigo, and in the last case there were four attacks of vertigo and two convulsions. In each case the attacks were very much reduced in frequency ; no bad results were observed. The digestion was not impaired, the pulse was fuller, the temperature normal, diuresis increased, sleep uninterrupted and calm, and the mental condition unchanged. The author believes the results were due to the combination of drugs and not to the bromide alone.—*British Medical Journal*, Oct. 23, 1897.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

In the *Western Medical Review* of December 15, 1897, M. D. Jones concludes a paper on this subject by asserting that the value of antitoxin in diphtheria is no longer a question of opinion or theory, but an established fact. The few who oppose it have proved nothing in comparison with the enormous mass of evidence as to its specific value. It may, therefore, be affirmed that the following facts have been demonstrated :

1. That diphtheria antitoxin, where generally employed, has reduced the mortality from diphtheria at least one-half.

2. That it has distinctly favorable effects on the clinical course of the disease, shortening it and lessening its severity.

3. That the earlier the treatment is commenced the better the results obtained ; the mortality, when adequate doses of antitoxin have been given within the first forty-eight hours of the disease, not exceeding five per cent.

4. That antitoxin is a specific against true diphtheria, and less efficacious in mixed infection, but even in these forms of diphtheria it is of decided benefit.

5. That it is not necessary to wait for a confirmatory bacteriological diagnosis, but that in every clinically suspicious case of membranous angina, especially in children, a medium dose of antitoxin should immediately be given, and repeated if required by the further development of the case.

6. That antitoxin is a remedy without serious after-effects in the doses which have ordinarily been employed; that it has no injurious action on the kidneys, the heart or the nervous system; that it does not entirely prevent albuminuria, heart failure and post-diphtheritic paralysis, because the effects of the diphtheritic toxin which has already entered the system before the administration of the remedy, no matter how soon the treatment is begun, are not always completely counteracted by the antitoxin.

7. That the protection conferred by immunizing doses of antitoxin is almost absolute for a short period of time.

8. Antitoxin should begin in early or mild cases in not less than 500-unit doses; for moderately severe or recent laryngeal cases in not less than 1000 unit doses; and in severe faucial or larnygeal cases in not less than 1500 unit doses.

If, in the face of the volume of statistics and testimony in favor of the antitoxin treatment of diphtheria, the writer hears a physician oppose or condemn it, he concludes that he either knows nothing about its use practically or his experience has been very limited and with an inferior product, or perhaps he has treated the case until all other means have failed—hopeless degeneration of important organs has taken place—when as a last resort he expects antitoxin to accomplish the impossible. Under these circumstances the remedy is not employed scientifically or honestly, and should reflect discredit upon the physician and not the remedy.

In the late administration of antitoxin we merely stop the storm waged against the frail bark of life, as irreparable degeneration has taken place, and it sinks beneath the silent wave of toxemia.—*Therapeutic Gazette*, April, '98.

HOW TO TREAT SICK HEADACHE.

Analgesine, says Dr. Hirtz in the *Journal des Praticiens* of December 11, 1897, is unquestionably a medicament of the first order. Huchard experimented with it as an antipyretic; but it is especially an analgetic, and Germain Sée used it commonly to combat pain. The dose is, so to speak, individual. Some subjects are relieved by a dose of four grains; others require fifteen grains; and sometimes thirty or forty-five grains are necessary to obtain recovery.

Patients should be warned against the abuse of this drug, which has become public property, and is frequently taken without the advice of a physician, as it gives rise occasionally to symptoms of veritable poisoning. Analgesine is more easily tolerated when combined with eight grains of sodium bicarbonate. It may also be administered hypodermically when the condition of nausea dependent upon the headache is too painful and too pronounced to allow of the ingestion of any liquid. It may be given in enemata, from thirty to forty-five grains of analgesine with six drops of laudanum being sufficient for four injections.

Before the employment of analgesine, says the author, caffeine was frequently prescribed, either in potion or in subcutaneous injection, and the following formula by Huchard may be recommended:

℞ Caffeine,
Sodium benzoate, of each 660 grains;
Peppermint water, 8 ounces.
M.

A teaspoonful is to be given every two hours until four teaspoonfuls have been given, each one representing four grains of caffeine. The same dose will be contained in a Pravaz syringe, with the following formula for hypodermic injection:

℞ Caffeine, 38 grains;
Sodium benzoate, 44 grains;
Distilled water, sufficient to make 2½ drachms.
M.

If the sick-headache persists after the administration of analgesine, other drugs may be tried, such as acetanilid. They should not be given except in divided doses, in small capsules containing from three to four grains five or six times a day. Care should be taken not to exceed thirty grains a day.

Phenacetine has the advantage of being almost non-toxic and of provoking much more rarely than analgesine eruptions and symptoms of intolerance. Capsules containing four or five grains may be given four or five times a day.

Exalgine does not give such brilliant results in sick-headache as in the trifacial neuralgias. Four grains may be given at a time, but this dose should not be exceeded, and its action should be carefully watched, as it gives rise to accidents.

Lauder Brunton, says Dr. Hirtz, recommends sodium salicylate combined with potassium bromide. The amount is twenty-three grains of the former and thirty-eight grains of the latter, given in four doses.

Immerwahr, Lewy and Schumann have found in methylene blue a very efficacious remedy for sick-headache,

especially the form called angeiospastic. They gave it in doses of a grain and a half four times a day, combining it with nutmeg as follows, in order to avoid vesical irritation :

℞ Methylene blue,
Pulverized nutmeg, of each 1.5 grains.
M.

This quantity will make one capsule, about four of which may be given a day.

Migrainine, which is considered by Schumann one of the best remedies for sick-headache is a combination of antipyrin and caffeine as follows :

℞ Antipyrin, 89.4 per cent. ;
Caffeine, 8.2 per cent. ;
Citric acid, 0.56 per cent.
M.

Aconitine is sometimes successful when other nervines fail. It is prescribed in globules only, each containing four one-thousandths of a grain, of which two a day may be given.

Guarana contains guaranine, which is identical with caffeine. It is given in a powder in doses of from eight to thirty grains dissolved in water.

Seguin, who was a great advocate of the ocular theory of sick-headache, thought it was frequently due to defects of refraction, and he recommended the employment of mydriatics and the correction of the muscular defects by wearing proper glasses. As an internal remedy, he recommended the extract of cannabis indica, to be given three times a day in pills, each containing a fifth of a grain, which amount may be progressively increased to three grains. Gradle, of Chicago, prefers the tincture of cannabis in doses of from twenty to twenty-five drops twice a day, at an interval of six hours.

Ophthalmic sick-headache during its painful stage is amenable to the same treatment as common sick-headache. Other indications, however, present themselves. This form of sick head-ache is associated with nervous affections, such as neurasthenia, hysteria, certain mental troubles, epilepsy, tabes and general paralysis. The most useful treatment, and the only one really efficacious, given in the interval between the attacks in order to delay their recurrence, is with the bromides. Charcot and Fere, says Dr. Hirtz, laid great stress on the services which this treatment rendered. Potassium bromide, sodium bromide, or a mixture of several bromides, may be prescribed in amou nts increased from thirty to ninety grains in twenty-four hours.

Ophthalmoplegic sick-headache sometimes resists all treatment. During its painful stage antipyrin, phenacetine, exalgine, etc., may be employed. The paralytic stage is

frequently rebellious to all therapeutic intervention, and this is explained, says the author, by the anatomical and pathological changes. In one case Gubler found the oculo-motor nerve surrounded by an abundant exudation, with thickening of the pia mater. In a case coming under Weiss's observation the nerve was buried in tuberculous masses; in another the nerve was pressed upon by a fibro-chondromatous tumor. In spite of these facts, which baffle all attempts at cure, either the iodide or the bromide treatment should always be tried. Locally, energetic revulsives may be tried under the form of blisters, the cautery, or even the seton. Not only must the attacks be cured, but, what is more difficult to accomplish, their recurrence must be delayed in order to render them less frequent, and, if possible, to cause their disappearance. To do this, the various causes which lead to sick-headache should be taken into consideration. The patient should be put upon a strict diet; he should avoid all indigestible food, alcoholic drinks and liquors, the smallest doses of which bring on an attack of sick-headache in predisposed subjects. The majority of recoveries, according to Dr. Hirtz, are due to extreme sobriety.

Debout recommended the following as a prophylactic measure:

℞ Quinine sulphate, 45 grains;
Pulverized digitalis flowers, 2 grains;
Syrup, a sufficient quantity.
M.

This quantity will make thirty pills. The dose is a pill every night for a period of several months.

In arthritic, rheumatic and gouty persons, the following treatment is recommended by the author: The patient is put upon a strict diet; nitrogenous or indigestible food, especially vegetable, is not allowed at night, and water or a drink like weak tea may be taken. In the morning, before eating, Carlsbad or Tarasp water, heated to about 104° F., may be taken, or else Vichy water. Every night, before supper, a pill containing the following mixture may be taken:

℞ Quinine valerianate, 15 grains;
Extract of colchicum, from 3 to 7 grains;
Extract of digitalis, 3 grains;
Extract of aconite, 1½ grains.
M.

This quantity makes ten pills.

Neurasthenic sick-headache is best benefited by living in the country, moderate muscular exercise, and a quiet life free from professional occupations. It may be overcome by

the employment of the phosphates or the glycerophosphates, the use of which may be alternated with arsenic under the form of Fowler's or Pearson's solution in amounts of from six to twelve drops a day ; or strychnine arsenate may be used in globules containing fifteen one-thousandths of a grain, of which from two to three a day may be given.

Hydrotherapy, static electricity and psychotherapy are, says Dr. Hirtz, ordinarily valuable adjuvants.—*The Therapeutic Gazette*, April. '98.

BLOOD REACTION IN DIABETES.

Loewy (*Fortschritte der Medicin*, March, 1898, *British Medical Journal*) records some further investigations of Bremer's reaction in the blood of diabetic patients. The original method of obtaining the reaction was to stain a film of blood in two solutions, each consisting of a mixture of 0.5 per cent. solution of eosin with a saturated solution of methylene blue, the one contained excess of the former, the other excess of the latter stain. After passing the film through these two mixtures successively, Bremer found that in normal blood the red corpuscles were stained deep brown, whereas in diabetic blood they are left pale yellow or greenish yellow. Loewy, in his experiments, used the simpler modification which has lately been suggested. The blood is stained two minutes in 2 per cent. methylene blue, and then 10 seconds in 0.125 per cent. eosin solution. Keeping strictly to the technique described by Bremer in this method, Loewy found that, in every case of diabetes in which the amount of sugar in the urine was more than 2 per cent., the blood gave the characteristic reaction. In one case, where dieting had already caused the sugar to disappear, the reaction was still obtained in the blood. The failure of several observers to obtain the reaction in diabetes is probably due to their not having paid sufficient attention to the details of the method, which must be adhered to strictly. No reaction was obtained in the blood in cases of severe anæmia; no opportunity occurred for trying it in leucæmia, in which some observers have found the reaction. The blood plasma is not necessary for the reaction ; 5 c.cm. of blood were taken from a vein of a diabetic patient, and separated from the plasma by a centrifuge ; the corpuscles were then washed with normal salt solutions until the washings showed no trace of sugar ; the typical Bremer reaction was then obtained with the blood corpuscles. It was also found that normal blood treated with a weak acid gave the reaction.

PROFESSOR SCHENCK'S RESEARCHES ON THE PREDETERMINATION OF SEX.

In view of the fact that Professor Schenck's conclusions as to the power of artificially determining the sex of offspring have served as a nine-days' wonder to some of the lay papers, it seems advisable to lay before our readers a plain statement of his argument, taken without comment from the pamphlet which he has just published. It opens with the statement that it is impossible to command natural processes, but possible by scientific means to exercise a more or less effectual influence upon them, in order to extract from them the best possible results. His essay falls into three parts—a summary of the writings of his predecessors, an account of his own researches and deductions, and finally a description of the method of treatment he has devised, with illustrative cases.

In the development of an embryo the generative organs are at first indifferent—hermaphrodite; in the further process of growth one set develops while the other atrophies. This tendency must be predetermined from the time of fertilisation, for each cell formed from the ovum must have sexual characters since these are not confined to the generative organs but appertain to the whole body. The readiness with which an ovum can be fertilised depends upon its position in the ovary, the thickness of its envelope, etc., and these may also have a bearing on the question of sex. In other words, the predetermination may precede fertilisation, and of this confirmation is found in the development of bees and in the production of male and female flowers by plants under different nutritive conditions. In this connection Professor Schenck enunciates and discusses at considerable length the views of previous writers. He points out that the male sex preponderates to a definite though slight degree in the total number of births, and that the sex of a child is more likely to be that of its older parent. He pays particular attention to the theory of crossed sexual heredity, by which each sex tends to propogate the other. Thus, if the sexual power of the male be greater, a female offspring is more likely to result, and *vice versa*. This theory is threshed out most thoroughly and with abundance of quotations and examples; in the end Professor Shenck practically accepts it, and makes use of it in his further work. With regard to the influence in environment upon sex, he quotes Robin's statement that in warm climates females preponderate, in cold and unfavourable males. Born also showed that 95 per cent. of artificially fertilised frogs' eggs hatched out as females, this being an

effect of nutritive conditions acting after fertilisation. Thury's researches are fully analysed, and are stated to have originally called Professor Schenck's attention to the subject. Thury found that cattle fertilised at the beginning of "heat" threw more females, at the end more males. This he explained by the degree of ripeness of the ovum, but Professor Schenck accounts for it on the crossed inheritance theory, the sexual power of the female being at its greatest at the end of the period of rut. This part of the work is summed up in the statement that the sex of offspring largely depends upon the state of nutrition of the parents, particularly that of the mother during pregnancy. During this period the difference between intake and excretion represents the food of the embryo, and hence requires special attention. The temperature is slightly raised, owing to oxidation processes, which entail a considerable consumption of red blood corpuscles and consequent diminution of hæmoglobin.

The second section begins with the enunciation of the fact observed in domestic animals and in insects, that the better the mother is nourished the more females she produces, the number of males remaining practically constant. This influence upon the fœtus *in utero* has received but little attention from the practical point of view, and Professor Schenck consequently set out upon a series of observations based on a theory of crossed sexual inheritance. He first investigated the excreta, and particularly the carbohydrates of the urine. The presence of a certain amount of sugar, which is commonly recognisable by the phenyl-hydrazine test in perfectly normal individuals indicates incompleteness of the oxidation processes, whereby a certain quantity of heat is lest to the body. This physiological output of carbohydrate is in the male sex most marked during the period of growth—that is, between the ages of 14 and 19. In women there is no corresponding increase, but small quantities may appear in the urine before and after menstruation, while Iwanoff and others have shown that glycosuria is common in pregnant and parturient women. Now the amount of sugar normally excreted is equal in men and women, but more significant in the latter, owing to the lesser activity of their metabolic processes. For the perfect ripening of the ovum it is necessary that oxidation shall be perfect—that is, that no sugar shall be left unburnt. Where there is a remainder of unburnt sugar the ovum stands a chance of being less ripe and less well nourished. Hence the properties of its protoplasm are less well developed, and by the theory of crossed inheritance it is more likely to produce a

female child. On the other hand, when the urine is free from sugar the ovum can attain perfect development, and give rise to male offspring. It is upon this cardinal principle that Professor Schenck's theory is based. He holds that a prolonged course of appropriate nourishment both before and after fertilisation will tend to the conception of male children only.

The next question is of the means to be adopted to ensure this end. If a male child is desired, and the maternal urine contains no sugar, but abundance of reducing substances (particularly the lævo-rotary glycuronic acid) he allows impregnation forthwith. If, on the other hand, sugar is present, it must be removed, and the reducing substances increased before fecundation may take place. It is found that the urine of a woman pregnant with a boy contains more reducing substances than that of one with a girl. We need not enter into the details of the diet recommended beyond saying that it contains a large amount of proteid, which seems to be required by a male embryo.

Finally, Professor Schenck gives what may be called his clinical results. He quotes numerous cases to show that the bearing of female children is associated with glycosuria. In such instances he recommends a diet comprising plenty of proteid and fat, and as little carbohydrate as can be tolerated; this must be taken for two or three months before and three months after impregnation. He gives one example in which six boys were born in succession under this treatment, and a girl immediately it was relaxed; and others in which boys were born after repeated births of girls before the treatment. In all, out of 7 recorded cases, 6 were successful. He concludes that the nutrition of the mother plays a most important part in the determination of sex, and that in countries where much flesh is consumed there is a marked preponderance of male children. This can be imitated artificially, but it is far more important to ensure the completeness of oxidation processes in the body. As long as the combustion of the food is perfect, and the urine is totally free from sugar, the exact amount of meat consumed is of secondary importance. The birth of male children can thus, in certain cases, be predetermined, but the voluntary production of girls is a problem as yet unsolved.—*British Medical Journal*, May 7, 1898.

DIET IN HEALTH AND DISEASE.

Dr. William Henry Porter, of New York, in a recent paper on this subject, stated that the most valuable

food-stuffs are beef, eggs, and milk. Animal foods have the advantage of being easily digestible and not prone to undergo putrefaction, but they are deficient in nucleo-albumin, which is essential for the construction of the red-blood corpuscles and for supplying energy to the nervous system. It is for this reason that those who are kept for any length of time on an exclusively animal diet become anemic and weak. Vegetable foods, on the other hand, contain a large percentage of nucleo-albumin, but also an unduly large proportion of starch and sugar, and are prone to undergo fermentation. Moreover from 15 to 60% of vegetable food-stuffs pass through the alimentary canal unchanged. It is true that fruits are laxative, but they are so because they cause fermentation, and in doing so, they favor the production of toxins by microbic activity. The most important of the vegetable foods are rice, maccaroni, green peas, spinach and lettuce. Potatoes should be taken quite sparingly. In connection with the subject of fermentation within the alimentary canal and the produetion of toxins, it should be noted that Dr. Porter expresses the belief that these toxic products arise, for the most part, from the decomposition of the mucus as a result of the action of the microbes. From this he deducts the corollary, that treatment directed towards reducing the quantity of mucus in the alimentary canal to a minimum is an excellent way of controlling these intestinal toxemias. He has found that the administration of tannalbin, in doses of from 5 to 15 gr. t. i. d., causes a precipitation of this mucus and a destruction of the culture-medium, and so acts as a valuable means of diminishing putrefaction. In prescribing the diet for very sick persons, it is wise to begin first with egg water and follow this successfully with a little dry toast and beef-tea, and finally with scraped raw beef. Not until it has been found that these can be digested easily by the patient is it safe to give fully cooked meats or vegetable food-stuffs. For those very exceptional cases in which milk really cannot be tolerated, the milk should be given warm, and after the administration of some ox-bile and pancreatic extract. If the milk is taken in this way, to the exclusion of everything else, it is rare that there will be any special difficulty. If there is trouble, skimmed milk or butter-milk should be substituted. In those exceedingly rare cases in which even these methods fail, and milk seems to be but little short of a poison to the individual, the nutrition can be maintained by giving a little beaf-tea and a large number of raw eggs daily in a little sherry wine.—*The Philadelphia Medical Journal, April*, 1898.

DYSPEPSIA.

Thorizon's treatment of dyspepsia and gastro-enteritis in infants is as follows:

1. *Acute dyspepsia:* A diet of pure water for twelve to twenty hours, until the acute stage has somewhat abated. At the same time pepsin and dilute muriatic acid is administered, the same plan is followed in the chronic form.

2. *Acute gastro-enteritis:* Diet of water for twelve to thirty-six hours. When vomiting is present, "lavage of the stomach," and large Hegar's enemata. Internally—calomel in the usual doses.

When high fever is present, cool baths, in the algid stage, mustard baths, rubbing the skin with alcohol and administering the latter internally. He also gives subcutaneous injections of caffein and artificial serum.

When the acute stage is passed, benzonaphthol, bismuth, lactic acid, and, later, Kefir should be prescribed.

3. *Chronic gastro-enteritis:* An attempt should be made to check the diarrhoea by bismuth-benzonaphthol. Tonic treatment should be employed, and the child must be kept warm.—*Revue de Malade d L'enpao Pediatrics.*

THE TREATMENT OF INSOMNIA IN CHILDREN.

Comby (*La Med. Mod.*, 1897, *viii.* 249, *Pediatrics*). Soporifics are not indicated in infants when insomnia is due to improper food or to disturbances of digestion; in such cases we must remove the cause. Insomnia is often met with in children who are given alcoholic potions, coffee, tea, etc. In these cases a cure is obtained by withholding the cause. Some children sleep restlessly on account of eating too much nitrogenous food; these children should be allowed meat only once a day. If the cause is not found in feeding, insomnia may be due to nervous cause. Before having recourse to soporifics, physical anodynes should be applied, for example; warm baths, before bed-time, of fifteen to twenty minutes' duration. In some children cool baths or even douches will exert a more favorable influence. Finally, we may use the wet pack advantageously two or three times a day in cases of marked cerebral irritation. In children, whose brain is very active, rest to the latter should, of course, be prescribed. Should all these measures prove insufficient, it may become necessary to administer soporifics. One of the simplest of these remedies is orange flower water, which may be prescribed in quantities of twenty to sixty grammes (5 to 15 drams) before bed-time. This remedy frequently induces

quiet sleep, lasting the whole night. Opium should be administered, but only in small doses, when insomnia is due to cough or pain. The bromides are always indicated when neurosis accompanied by cerebral irritation is present. Bromide of potassium or sodium may be given in doses of 0.10 (1½ grains) in sweetened water or in syrup or milk. If the child is unable to swallow these remedies, they may be administered in clysmata or in suppositories.

Chloral hydrate in doses of 0.05 (¾ grain) in the first year of life is safe and active, in larger doses it has a bad action on the heart. It may be used in solution, in enema or in the form of suppositories.

A combination of bromide of potassium and chloral is quite effective:

℞ Potassii bromat..... .....
Chloral hydrat, aa.....2.0 (½ dram)
Extr: hyoscyami .....
Extr. belladonnæ..... .....
Extr. cannabis indicæ aa.....0.02 (⅓ minim)
Syr. flor. aurant.....30.0 (1 ounce)
Aq. destill.....40.0 (1⅓ ounce)
Sig.—A coffeespoonful every hour.

The disulfones employed in recent years are especially indicated in children. Sulphonal may be given internally or in clysmata in doses of 0.10, to 0.15, to 0.25 (1½ to 4 grains) at a dose, according to the age of the child. If sleep is not induced after one or two hours, the dose may be repeated. As regards trional, Claus recommends it in children, from one month to one year old, in doses of 0.20 to 0.40 (3 to 6 grains), in children between one and two years of age in doses of 0.40 to 0.80 (6 to 12 grains), in those between two and six years in doses of 0.8 to 1.20 (12 to 18 grains), in children between six and ten years of age in doses of 1.20 to 1.50 (18 to 23 grains.) Comby considers these doses too large, as has seen the temperature fall from 38.5 C. to 34.0 C. in a greatly excited girl ten years of age suffering with meningitis after the exhibition during the day of one gramme (15 grains) of trional, divided in four doses.

According to his numerous experiments with trional, this remedy proved to be an excellent hypnotic in doses of 0.25 to 0.75 (3¾ to 11½ grains), which was well borne and showed no bad after-effects in these quantities. This dose may be repeated every evening, but it would be better to omit it every other night, for the reason that sleep is frequently permanently induced after one to two doses of trional.

ALCOHOLIC STIMULATION IN CONTINUED FEVERS.

What are the indications for the use of alcoholic stimulants in such febrile diseases as typhoid, grippe, pneumonia or septicemia? This is the question put and answered by CABOT in the *Boston Medical and Surgical Journal* of December 2, 1897. *The Therapeutic Gazette*, May, 1898.

There are many who regard the existence of one of these febrile diseases as of itself a sufficient reason for giving alcoholic stimulants. For example, in Wood and Fitz's "Practice of Medicine" it is laid down that "alcohol in some form should be used in every case of typhoid from the beginning, unless there be some very strong reason for refusing it, as where there is a distinct heredity towards drunkenness." Many who might not agree to this course in typhoid believe in using alcohol in every case of pneumonia, whatever its nature, and in all severe septic and pyemic processes the author supposes that the majority of good practitioners in this vicinity would prescribe alcohol as a matter of routine. From this point of view, the diagnosis once established, the exhibition of alcoholic stimulants is a matter of course.

On the other hand, there are in many modern text books signs of a reaction against this wholesale and routine use of stimulants. For instance, W. Gilman Thompson, in his new work on dietetics, says: "I am inclined to prescribe very much less alcohol than formerly;" and again: "The routine employment of alcohol in typhoid is to be deplored." Pepper, in the edition of 1894 of the "American Text-book of the Theory and Practice of Medicine," says: "Until recently the symptoms of alcoholic overaction (in typhoid) were often mistaken for advancing debility, and regarded as an indication for still more free stimulation."

Of modern authorities Strümpel is the only one who distinctly disbelieves in the use of alcohol in any of the diseases above mentioned. Even in pneumonia he does not give alcohol except to patients who have become habituated to it before their illness. "We could never satisfy ourselves," he says, "of the often praised action of alcohol on the heart."

Between these two extremes—the routine use and the absolute avoidance of alcohol in continued fevers—falls the practice of most of us. The usual opinion is that there are certain indications for the use of alcohol in such cases. What we want to bring out in this paper is that many of us are not as clear or as consistent as we ought to be as to just what we expect to gain by stimulation, and as to the reasons for its use in any particular case.

For example, Cabot thinks there is a fairly wide-spread

impression among us that alcohol is itself directly inimical to the toxemia which forms the chief danger in acute infections.

Does this impression rest on any satisfactory experimental basis? The writer has never heard of any such. If it could be shown that the use of alcohol increases the germicidal power of the blood, or of the power of the kidney to excrete toxins or precipitate them in the stomach, we should have a satisfactory reason for giving stimulants, as, for instance, most surgeons now give them in septic cases. There would then be good reason for giving stimulants, even if they did not improve the heart's action, the digestion, or any other function of the organism. But, so far as known, there is no experimental evidence that the ingestion of alcohol does increase the antitoxic or bactericidal power of the blood, and there is a certain amount of evidence that, so far from increasing the ability of the kidneys to excrete toxic products, alcohol has just the reverse effect. We know that alcohol precipitates snake poison in the stomach where it is excreted, but the writer is not aware of such evidence as regards other toxins. He has heard surgeons and others express a belief that it is no harm to stimulate a septic patient even to the point of making him drunk. As to the wisdom of this course the following experiments are relevant:

1. In the *Comptes de la Société de Biologie* for 1895 (p. 51), Wurtz and Hudels report experiments on fourteen rabbits and seven guinea-pigs, which were given enough alcohol to make them drunk, and then killed, and their blood examined for bacteria. Over one-half the cases showed the presence in their blood of streptococci, colon bacilli, proteus vulgaris and various anaerobic organisms.

The control animals, to whom the same dose of alcohol had been given, recovered from its effects, showing that the inroad of bacteria in the autopsied cases was not due to any moribund condition from a lethal dose. They were simply drunk and not dangerously poisoned.

If large quantities of alcohol make bacteria enterthe blood in animals, why may it not have a similar effect in sick men? Are we likely, then, to benefit a septic patient by making him drunk?

2. Again, take the question of the excretion of toxins by the kidney. It is well known that in most acute infectious diseases, where the patient is doing well, the urinary toxicity is greatly increased, and this is taken to show that the kidneys are aiding in the fight against the disease by excreting the poisons produced by the infectious agent. Kellogg found that the use of alcohol, so far from increasing the urinary toxicity, greatly decreased it. The writer does not

vouch for these results, but offers them for what they are worth. There is no doubt that cold bathing in typhoid does increase the urinary toxicity, as has been shown by Roque and Well.

Apart from the question of the action of alcohol as an antitoxic or bactericidal agent, the following indications for using it in continued fevers are stated in most text-books.

1. Persons long addicted to its use should not be deprived of it in febrile diseases. On this point there seems to be no disagreement.

2. It may be the only form of food which the patient can and will take.

3. Sudden collapse or great prostration from any cause is generally agreed to call for stimulation.

As to these three indications the writer thinks most physicians would agree. But the great majority of writers go further and recommended that:

4. Any serious complication, such as hemorrhage or perforation in typhoid, severe nervous symptoms like delirium—in fact, anything that shows an especially severe case—should be considered an indication for stimulation.

5. Persons over forty years of age and persons of feeble constitution are believed by most writers to need stimulation in case they catch any severe infectious disease, like typhoid or pneumonia.

On the other hand, Ringer's views on the use of alcoholic stimulants are copied into many text-books, and they conflict with the belief that a severe or complicated case or one occurring in a feeble person should always be treated with stimulants. Ringer says in substance: "If after the use of alcohol we see the pulse become slower, the skin and tongue moister, sleep better, nervous symptoms less marked, breathing less hurried, food better taken—the alcohol is doing good. Not otherwise."

Now, if this be true, we cannot say that severe or debilitated cases need stimulation, but only that they may need it, or that they need it in case it turns out to do them good. Now this is where the writer thinks many of us err. We do not watch the action of alcohol as we do that of other drugs which may do harm. We often give it as we might give malt, and not as we give digitalis or calomel. When we give a diaphoretic or a purgative we look for its definite action; if we do not get it after a sufficient dose, we do not continue the drug. But the writer has repeatedly seen alcohol given whether any good effects appeared or not with a general idea that it must be doing good since it is a food and a stimulant. But in many cases it does not act as a stimulant—in

any dose; does not slow the pulse, moisten the tongue, or decrease restlessness and delirium; and other food is so well taken that it is not needed as a food—yet we go on using it under a vague impression that it helps the patient to fight his disease, makes him feel better perhaps, and at any rate cannot do any harm. Cabot enters a protest against such treatment which he sees constantly administered in our hospitals and elsewhere. He believes with Pepper that the symptoms of alcoholic poisoning are "often mistaken for advancing debility, and regarded as an indication for still more free stimulation."

There is a pernicious idea which has been repeatedly advanced by prominent physicians, that if the smell of alcohol is not present on the breath the amount of alcohol given must be doing good. But alcohol is not excreted solely by the lungs, and its ill-effects can be shown, as Ringer and others have pointed out, by other symptoms besides the smell of the breath.

It seems to the writer that what is most needed at the present time in order to improve our therapeutic use of alcohol is more experimental evidence on two points: (1) The effects of alcohol on the toxicity of the urine, and on the antitoxic and bactericidal power of the blood; (2) the effects of treating acute infectious diseases without alcohol.

The writer has often thought that therapeutic progress is seriously hindered by the fact that every case is given the best treatment known. He accounts for the long persistence of the bleeding treatment by supposing that since every patient was given the best treatment known—namely, bleeding—physicians had no chance to see how the disease would do without the treatment. Similarly, at the present day, so few of us have ever seen a severe case of sepsis or pneumonia treated without alcohol that it is very possible that some of us may attribute to the disease (as Pepper says) symptoms really due to the treatment. The writer has often been struck with the close resemblance between delirium tremens and some of the symptoms of severe febrile cases treated with the best known alcoholic stimulation.

In 1864 A. L. Loomis treated 600 cases of typhus fever without alcoholic stimulants as an experiment. His mortality record was six per cent.; the previous record in the same epidemic in cases treated with stimulants was twenty-two per cent,

N. S. Davis claims to have treated 1,000 cases of typhoid fever without alcoholic stimulation with a mortality of five per cent.

Kellogg, of Battle Creek, states that he has treated

eighty-two cases of pneumonia without alcohol, with a mortality of 4.9 per cent.

The author states that he is aware that statistics can lie, and he is not prepared to say, as Strümpel does, that we should give up alcoholic stimulation in fevers; but he does think that we need a broader experimental basis for our practice of and use of stimulants simply because the case appears to be very severe.

In conclusion he believes that alcohol, like other drugs, should be given to accomplish a definite therapeutic result, and if no signs of that result appear the drug should be withdrawn. Experimental evidence is much needed: (*a*) As to the effects of alcohol on the toxicity of the urine and the bactericidal power of the blood; (*b*) as to the result of treating acute febrile diseases without alcohol.

BACTERIOLOGICAL RESEARCHES IN WHOOPING COUGH.

By E. CZAPLEWSKI and R. HENSEL (*Deutsch. Med. Woch.*, 1897, No. 37, *Ref. Der Kinder-Arzt*, 1897, Hft. 12. *The Post Graduate*, March, '98).

Experiments hitherto made upon the etiology of whooping-cough have thus far given no definite results. Therefore, during the last Koenigsberg epidemic of whooping-cough, the authors instituted researches, obtaining positive results. The sputum was received immediately after the paroxysm, in sterile or (what is irrelevant) non-sterile vessels, and washed in peptone-water; from the solid residue of the sputum floculi smear preparations were made. The staining is done with carbol-fuchsin, or better with carbol-glycerin-fuchsin (both diluted), preferably after a previous short treatment of the preparation with 1 per cent. acetic acid. Cultivation took place upon Loeffler's blood serum, at 37°C. The micro-organism thus found appeared as a very small, short rod, with oval rounded ends. It is about as large as the influenza bacillus, which it also resembles through its staining qualities, but, in distinction from this, it grows upon the ordinary culture media. Furthermore, the size is very variable. The smallest forms appear as cocci, in division as diplococci. The adult rod is only 2-3 times as long as broad. Longer forms are found in cultures, more rarely in the sputum. Sometimes several individuals are arranged in chains. The bacterium is non-motile, short-lived and little resistant. Up to this time lasting (Dauer) forms have not been observed. Most of the bacteria lie free in the sputum; more rarely they occur in the cells, yet sometimes many cells are entirely filled with them. In sputum that has not been well washed, still other bacteria are

found, particularly streptococci, whereby isolation upon serum plates is rendered very difficult. Pure cultures were first obtained by means of secondary streak inoculation upon plates. These can readily be grown as a not very characteristic, yellowish-gray coating upon serum tubes, and then also upon the remaining ordinary nutrient media, even upon gelatine at 23 ° C. Inoculation experiments upon animals yielded no results, as in the case of the influenza bacillus (here, as is known, a transfer inoculation only takes place in a specific form in apes).

The above described findings were constant in over thirty cases. The assumption that this micro-organism is the cause of whooping-cough was confirmed by the fact that, by its detection, the authors were able to foretell the existence of whooping-cough in several cases in which a positive clinical diagnosis could only be made at a latter period. Moreover, one of the authors became affected during this investigation with a severe coryza associated with general symptoms. Coughing was slight; upon only one day were several convulsive coughing attacks observed. The described bacteria were found in great numbers in the nasal secretion. The authors believe that Burger (*Berlin klin. Woch.*, 1883. No. 1) has already described the same bacteria.

TREATMENT OF THE ATAXIA IN TABES DORSALIS BY THE RE-EDUCATION OF THE MOVEMENTS, FRAENKEL'S METHOD.

By HIRSCHBERG (*Arch. de Neurol.*, Vol. II., 1896, Nos. 9 and 11; *The Post-Graduate*, March, 1898).

The author bases his conclusions on a study of nine cases. In the beginning the patients practice the movements for one-half hour every day, but after they have become accustomed to them an hour is the customary time. This should not be exceeded, nor should any considerable fatigue be caused. In the three of the cases which the author mentions, the ataxia was so profound that the patients were unable to walk or to stand, and in the remaining three cases the ataxia was of a moderately severe degree. Improvement was manifest in every case, and in some this was very marked. Concomitantly with the bettering of the ataxia the patients were subjectively improved. They not only felt better, but remarked that when in bed they knew where their legs were, etc. There was no objective improvement of sensory disturbances. According to the author's experience, Fraenkel's method may be employed with benefit in all uncomplicated cases of tabes; nevertheless in every case the patient's nutrition must be fairly well preserved. It should

not be used when tabes is complicated with other diseases—such as of the heart, for example. An absolute contra-indication to its use the author sees in tabic joint affections The blind tabic patient finds no benefit whatsoever. Cases in which the tabes has developed acutely should not be treated by means of the Fraenkel method at once—on the contrary, this method of treatment should be delayed until the disease comes to a standstill, or until the progression of the disease is extremely slow.

TREATMENT OF MANIA.

By MAGNAN (*Revue de Psychiatrie*, 1897).

The author's advice regarding the treatment of mania is summarized as follows: I. No restraint and rest in bed. The patient should never be put in a cell except as an absolutely last resource. 2. Baths, bromide and chloral. 3. When there is intense excitement and profound insomnia, hydrochlorate of hyoscine may be used subcutaneously. 4. The concentrated nutrition must be given, frequently repeated, and all forms of fermented liquors interdicted. The straight jacket is never used. To quiet the patient, baths at 33 ° C. are given, the patient being kept in the water for from two to five hours, and the same time cold applications are made to the head. If the patient is extremely maniacal wet packs may be used instead of the baths. In the evening the patient should receive from 40 to 60 grains of bromide of potassium and two or three hours later from 10 to 40 grains of chloral. After a week or so, when the patient has quieted somewhat, the dose of bromide is diminished and the chloral is given only occasionally, sulfonal and trional being substituted. Patients that are rebellious to the bromide-chloral medication often take increasing doses of laudanum with very good effect. Morphine should not be given. Over-medication is the mistake usually made in the treatment of acute mania.

PHYSICAL ENDURANCE.—WHY WE GET TIRED.

It should be impressed upon all young persons that during life each member of the body, in the very act of living, produces poison to itself. When this poison accumulates faster than it can be eliminated, which always occurs unless the muscle has an interval of rest, then will come fatigue, which is only another expression for toxic infection. If the muscle is given an interval of rest, so that the cell can give off its waste product to keep pace with the new productions, the muscle will then liberate energy for a long time. This latter condition is what we call endurance.

The power and endurance of the human machine is limited according to our understanding of the above facts, and also our recognition of its slowness in getting started. Like any other ponderous and intricate machine, the body requires time to get in harmonious working order. The brain, nerves, heart and skeletal muscles must be given some warning of the work they are expected collectively to perform. Ignorance of this fact has broken down many a young man who aspired to honors on the cinder-path. The necessity of getting all the parts of the body slowly in working order is well understood by trainers and jockeys on the race track, as is evidenced by the preliminary "warming up" they give their horses, although it is doubtful if the trainers could give any physiologic reason for this custom.

It is the general impression among athletes that exhaustion and "loss of wind" is due to the inability to consume sufficient oxygen and exhale rapidly enough carbon dioxide. When the muscle is moving rapidly and forcibly it is true that it demands more oxygen, and gives off to the blood more carbon dioxide than when at rest. When a man is running as fast as he can make his limbs move he is able to keep up the pace but for a short distance unless, like the hunted hare, he runs to his death. On account of the forced, vigorous and rapid muscular action in this case, the poisonous materials are thrown into the blood, to be carried to all parts of the body—muscles, nerves, brain. The heart is affected by this poison through the nerve cells controlling that organ; the muscles of respiration are similarly disturbed. The panting, distressed efforts of breathing, sidelong tumbling, anhelation and final semi-consciousness of the hunted stag or hare are a good example of acute auto-intoxication ending in death. This latter deplorable condition is not unknown among the annals of human strife for athletic honors, even with our present advanced knowledge of physiology.—*From the Physiology of Strength and Endurance, by* W. L. HOWARD, *in Appletons' Popular Science Monthly for June.*

THE USE AND ABUSE OF HYPNOTICS IN INSOMNIA.

The use of hypnotics in the treatment of insomnia is simply the use of symptom remedies; insomnia is a symptom, not a cause of disease nor a disease. Sleep is essential to the welfare of the organism in the same sense that food is. Deprivation of one or the other causes death in about the same period of time.

The use of hypnotics, therefore, should be temporary while the underlying cause of the insomnia is being removed

or palliated. Nor, indeed, is it well at the outset to employ hypnotics without trial of other measures. Aside from the removal of somatic causes for sleeplessness, various general methods may be employed. One of the best is a bath at 104 F. for five minutes. The general cutaneous vascular dilatation, increased by rubbing with a coarse towel, is frequently followed by a good night's rest. Warm liquid food, as a glass of hot milk, a bowl of soup, will often give satisfactory results. In fact some of the hypnotics which, on account of their insolubility, must be given in considerable quantities of hot liquids, owe not a little of their reputation to the vehicle in which they are administered. In debilitated individuals, a glass of stout or whiskey in hot water (hot Scotch) may work wonders. In tired subjects, strychnine sulphate in moderate dose acts as a hypnotic, not because it makes a too-tired individual just tired enough to sleep, as a distinguished professor of medicine would have it, but because strychnine dilates arterioles. Sometimes stimulation of the emunctories, as by sodium sulphate, again in hot water taken at night, will be followed by sleep, particularly in gouty subjects, not because it is hypnotic, but on account of its action on liver, intestines and kidneys. Methods which relieve pain —position, topical applications—are hypnotic.

Sleep is accompanied by cerebral anaemia and systemic cutaneous vascular dilatation. Any method which produces these effects will tend to the production of sleep. When these all fail, and often they do, hypnotics must be resorted to. The safest only should be chosen; they are chloralamide, pellotine, paraldehyde and trional.

The abuse of hypnotics comes from two sources: (1) careless and ignorant physicians, and (2) conscienceless prescribing druggists. The careless physician prescribes for the symptom insomnia, little caring whether it be due to cerebral degeneration, organic cardiac disease, obstructive pulmonary disease, latent gout, functional intestinal derangements or hysteria. The ignorant physician uses opium or its alkaloids, not knowing that these are narcotics, clubs a patient into insensibility and calls it sleep. Here commences the opium habit, or, not believing in "new-fangled" remedies, he keeps closely to chloral, and either adds to the list of chloral fiends or terminates the life of one who is suffering from an unrecognized heart lesion, the cause of the insomnia. Or, again, he may be a therapeutic nihilist—a polite name for the therapeutic ignoramus—and finding that drugs when administered by him have but slight beneficial effect, concludes that they have none at all, launches out with a combination of drugs, and succeeds in making his patient sleep because, with all

functions overhelmed, he can do nothing else. The danger of hypnotics are immediate (death) or remote (interference with nutrition). The possibility of habit is always to be borne in mind. Druggists are responsible for a large share of the abuse of hypnotics. They openly prescribe hypnotics in doses far exceeding those considered safe and further repeat prescriptions containing hypnotic drugs even when the prescription distinctly forbids this. In England, sulphonal is sold as openly and carelessly as are the ordinary necessities of life. With equal ease coffee can be purchased for breakfast and sulphonal for bedtime. The same is true in this country. So long as druggists prescribe and sell without authority, so long will hypnotics be abused. And druggists are beyond control.

The only remedy lies with the physician. Let him study his materia medica, learn his therapeutics, and apply intelligently what he has learned. Then, and only then, may we get the best results with the fewest disadvantageous symptoms, do the most for our patients, and after all rest with a consciousness of duty well performed.—*The Post-Graduate, May*, 1898.

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.,

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospital.

A RETRACTOR FOR THE INTESTINES.

Karl Roser (*Centralbl. f. Chir.*, Berlin, 1898, XI, pp. 297-300) describes an instrument devised for the purpose of holding the intestines back out of the way during abdominal operations. The apparatus is made by soldering together the end of a steel wire sixty-two centimeters long and two millimeters thick, so that it forms a ring. The wire should be of such a temper as to allow of its being bent to fit the individual needs, at the same time being of sufficient elasticity to keep its shape and maintain enough pressure on the surrounding structures to hold the required position. The deleterious effects following pressure on the tissues may be overcome by covering the wire with rubber. Either gauze or lint is stretched over the ring. This instrument is of especial advantage in operations in the pelvis when the Trendelenberg position is contra-indicated, and also in operations in the region of the gall-blader, and it is useful in all abdominal operations where it is essential to keep the intestines out of the way.—*American Medico-Surgical Bulletin*, May, 25 1898.

MINIATURE HAMMERS AND THE SUTURE OF THE BILE DUCTS.

Dr. W. S. Halstead (*Bul. Johns Hopkins' Hosp.*, Vol. IX., No. 6, p. 67, 1898) says that the operation of choledochotomy should never be postponed solely for the purpose of allowing the ducts to become thickened, for the normal duct "can be sutured accurately, almost infallibly, and without danger of leakage or constriction." To facilitate the suture of the bile-ducts Halstead employs miniature hammers, the heads of which vary in diameter from 3 to 17 mm., and they have the handle inserted near one of the heads in order to make easy its introduction and removal. The mode of procedure in suturing the ducts is as follows: Two sutures are introduced to serve as retractors, and the incision into the duct is made between them. When all is ready for uniting the duct, a hammer of the proper size is inserted into the opening. Then, with the very finest of silk and needles, mattress sutures are introduced directly across the hammer-head, uniting the two sides of the incision. These sutures must of necessity go through the duct-wall, but as the contents of the duct are almost always sterile this makes no difference. The hammer is then withdrawn and the sutures tied. The advantages of being better able to control the position of the duct, of more ease in passing the sutures, and of cleanliness, are all manifest to the operator when he uses these hammers.—*American Medico-Surgical Bulletin*, May 25, 1898.

THE ADVANTAGES OF THE TRENDELENBURG POSTURE DURING ALL OPERATIONS INVOLVING, DIRECTLY OR INDIRECTLY, THE CAVITIES OF THE MOUTH, NOSE AND TRACHEA.

W. W. Keen (*Dunglison's Coll. and Clin. Rec.*, July, 1897) calls attention to the great advantages which may be secured by operating on the tonsil and on the adenoid growths in the pharynx in the Trendelenburg position. This position has also a much wider use in the removal of pharyngeal tumors, naso-pharyngeal tumors, extirpation of the tongue and upper and lower jaws, all operations involving the cavity of the nose, in cleft palate, hare-lip, epithelioma, and other tumors of the lips, roof of the mouth, etc. The advantages of this position are :—1. There is little danger of an aspiration-pneumonia following the operation. 2. A preliminary tracheotomy may generally be avoided, a by no

means slight advantage, since a tracheotomy-wound is necessarily an infected wound, adding greatly to the dangers of the principal wound. 3. There is little difficulty in giving the anesthetic. 4. The mouth being gagged open, if the operation is intra-oral, the interior of its cavity can be seen very readily, especially if with the gag a tongue-depresser is used. If not, then the tongue is controlled by a ligature passed through it. The soft palate can be lifted by a blunt hook, and adenoids removed from the vault of the pharynx with the aid of sight as plainly as if they were on the face. The arches of the palate, tonsils, the posterior wall of the pharynx, the roof of the mouth, cheek, etc., can always be seen and reached with that certainty which accompanies sight. A forehead electric light is of great assistance. 5. There is no spitting of blood into the face of the operator, and therefore no interruption of the operation. The author also incidentally alludes to the use of a slight Tredelenburg position in the removal of the breast, Estlander's, Schede's, or other operations on the chest, in all operations about the shoulder, neck or head. Soiling of the night-dress, underclothes, blankets, etc. is thus avoided.—*American Medico Surgical Bulletin*, Feb. 10, 1898.

POST-OPERATIVE INTESTINAL PARESIS FROM NERVE INJURY.

Dr. E. McGuire, of Richmond (*Virg. Med. Semi-Monthly*, Oct. 22, 1897), calls attention to and reports several cases briefly of the foregoing, which came under his care. The importance of post-operative ileus from nerve-injury has not received the attention that it should; one reason is that it is generally confounded with some other variety, especially the sceptic form, which is often added to the former in a few hours if not relieved. The nervous distribution of the intestinal canal being derived from the solar plexus, its impressibility and sensitiveness are not excelled in any part of the body, and it is little to be wondered at that over-stimulation from injury to the peritoneum is followed by a paresis of the muscular coat of the intestine to which the afferent or motor nerve is distributed. The wonderful inhibitory power of the nervous system over intestinal peristalsis is illustrated in the passage of a gall stone or renal calculus, in omentum strangulation, in ovarian compression from blows on the abdomen, etc. McGuire believes that a large number of cases where death is attributed to post-operative sepsis or peritonitis are either caused by or have their beginning from reflex nerve-injury. A bowel that has been exposed to the air for a long time until it has become blanched and dry, one that has been

subjected to rough manipulation, or has had its mesentery or coats torn or lacerated in separating adhesions, has, in the author's belief, sustained sufficient injury to lose, by reflex paresis, its functionary powers of absorption and peristalsis. Distension from reflex paresis may come rapidly or slowly. To a great extent, it depends upon the preparatory treatment of the intestinal canal prior to the operation. An exceedingly interesting, important and, at times, difficult matter is the differential diagnosis between the various forms of post-operative ileus. In every instance the problem to solve is, whether we have to contend with a case of traumetic, septic or mechanical ileus. Vomiting in post-operating traumatic ileus, if the effects of the anesthetic have passed off, does not occur as early as in the septic or mechanical variety, and in most instances is not excessive until the advent of sepsis. To the discomfort due to distension added pain is not severe. The distension of the abdomen is, usually, gradual and diffused over the whole surface, and not limited at first to a portion of the abdomen, as so often seen in mechanical ileus in its early stages. After extensive distension has occurred and septic paresis or peritonitis is added, which condition is usually, but not always, accompanied by a rise of temperature, there is no line of demarkation between these two forms. One gradually merges into the other, and the case rapidly progresses from bad to worse temperature. The pulse should be watched closely, as it often gives the first indication of impending complications by gradually increasing in frequency. Rapid operations, the avoidance of exposure and rough handling of the intestines, the repairing of all peritoneal injuries as far as possible, the prevention of traction on the intestinal walls, are all important in lessening the danger of a paretic bowel due to nerve-injury. Finally, peristalsis should be excited that an evacuation be secured. —*American Medico-Surgical Bulletin*, Feb. 10, 1898.

THE TREATMENT OF FRACTURES BY MASSAGE AND MOBILIZATION.

Dr. Lucas Championnière (*Le Scalpel*, January 2, 1898) presented a patient at the Academy of Medicine of Paris who had had a fracture of the inferior extremity of the left humerus. The cure was perfect, and had been affected by massage and mobilization from the first. Apropos of this case, Dr. Championnère said that immobility is not an indispensable element nor even a useful one in the treatment of fractures. A mobilized bone with peripheral massage repairs itself more quickly and more easily than an immobolized one. A great number of fractures of the humerus are amenable

to this same treatment, all those from the finger to the elbow and those which are superior to the insertion of the deltoid. Adult and aged subjects are those most benefited by this treatment. These principles apply not only to fractures but also to all tissues which have undergone traumatism. Immobility does not favor the repair of tissues or of organs; movement is as necessary to their repair as to their life. Immobility in surgery is harmful, and should become a thing of the past. Dr. Péan acknowledged that the results obtained were all that could be desired, but could not agree to a general application of this method. It is advantageous in transverse fractures when the displacement is slight, but, when there is a fracture of the olecranon or an intercondyloid fracture, he felt convinced that immobility for some days gives most excellent effects. The method of Dr. Championnière may be all right in his hands, but complications are likely to arise when less experienced surgeons attempt to employ it. Dr. Championnière said that he had been slightly misunderstood. He wished to say that movement never produces pseudarthrosis. Immobility is only used to avoid deformity. There are fractures in which mobilization cannot be employed, as fractures of the humeral or femoral diaphyses, fractures of the inferior extremity of the tibia, etc.—*Medical Record*, May 7, 1898.

BRAIN SURGERY.

Ernst von Bergmann (" Die chirurgische Behandlung der Hirngeschwülste," Volkmann's " Klinische Vortrage," No. 200, December, 1897) recommends greater moderation in brain surgery. He considers the dangers to be apprehended from shock, infection, œdema and possible prolapse of the brain substance, and the risk of the formation of scar tissue, inducing epileptic attacks, sufficiently great to contra-indicate craniotomy in all cases when a positive diagnosis cannot be made. Tumors of the central convolutions are those easiest to diagnose and most likely to admit of successful removal. New growths in the temporal parietal or occipital lobes can be definitely located only when they encroach on the central convolutions sufficiently to give rise to motor disturbances. In addition to the customary motor symptoms, ophthalmoplegic examination is capable of giving much assistance in diagnosis. Choked disc is almost invariably present, and its character often permits an opinion as to the probable size of the tumor. General systemtic treatment of tuberculous nodules and gummata gives a better prognosis than operation, but when a tumor of another variety is suspected, although the presence of either of the above is possible, craniotomy is indicated.—*Med. Record*, May 7, 1898.

THE

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Editorial.

HOSPITAL ABUSE.

A paper was read on this subject at a recent meeting of the Montreal Medico-Chirurgical Society by Dr. George E. Armstrong, Associate Professor of Clinical Medicine, McGill University, in which he outlines the principal aspects of this much-discussed evil. He refers to the growing disposition to get medical care at the expense of the public by those who are able to pay for it. In New York city it was estimated that fifty per cent. of the population were in this category, and in most large cities doubtless a similar state of affairs prevails. Dr. Armstrong considers the causes under which this condition has developed under seven headings. The first is the "increased efficiency, comfort, attractiveness, even luxuriousness of the modern hospital ward"; the rapid increase in the number of hospitals and the accommodation for patients; the rivalry between the increased number of hospitals in the way of attaining to a high standard of efficiency, and swelling the list of patients cared for, irrespective of claims of the applicants for charitable attendance; the advance in medicine and surgery has increased the expense of treatment, and the necessity and expense of the care of trained nurses is often beyond the means of patients who, under the conditions of twenty years ago, would have received more simple treat-

ment; the commercial spirit of the time and the disposition to acquire wealth, make a display and live in luxury. "People will buy pianos, bicycles, good clothes, who have their doctor's bill unpaid or go to the hospital for free treatment when sick;" "the starting of this modern abomination, the private dispensary and hospital, by members of our profession for purely selfish and personal reasons;" lastly, hospitals dependent upon the public for support must, to avoid alienating sympathy and subscriptions, sometimes receive into their wards those who are very well able to pay.

Dr. Armstrong, as a hospital surgeon, recognizes the growing evil of hospital abuse and its demoralizing tendencies, although the effects are felt mostly by the general practitioners who are not connected with hospitals, and he looks for means of remedying the evil. Among these is concerted action between all the hospitals of a city and a central hospital board with representatives from each hospital and from the general profession, selected from each district. This Board could do its work largely through one or more enquiry officers. Ambulance work and first aid to the injured should not be interfered with, but after the first aid is rendered those able to pay should be referred to their regular medical attendant.

The Victorian Order of Nurses will be a means of enabling those of moderate means to secure the necessary trained care. Dr. Armstrong thinks that hospitals should care only for the sick who are unable to pay anything, and he is entirely opposed to dispensaries and hospitals accepting small amounts from patients. These are the chief points of this interesting and timely paper, and they touch the most vital parts of the problem. The subject was discussed at several meetings of the Society, and was referred to a final discussion at one of the early meetings in the autumn. There is no reason whatever that those who have the means should be cared for at the expense of charitable institutions intended only for the poor and receiving the support and contributions of the public, and it only requires a proper organization to greatly minimize this pauperization of the masses and robbing of medical men of their proper source of revenue. The City Hospitals not only extend this unnecessary charitable work towards those residing there, but it is a common thing

for well-to-do people from the surrounding country requiring operative work especially, to get this done free of charge at the City Hospitals. At the last meeting of the Medical Board of the Province of Quebec, a resolution was passed suggesting that all such be refused unless bringing a letter of recommendation from their attending physician in the country asserting their inability to pay for professional services. While it is probably not so necessary to have such a number of certificates of inability to pay as in the case of a patient for a hospital for the insane, yet it is important to demand reasonable proof that such is the case, and in the case of patients from the country we think the signature of the medical attendant and also that of a prominent layman in the locality should also be required; and in the city, where in most of the hospitals a certificate from any governor of the hospital or well-known citizen is all that has been required, the signature of a physician or of the one who last attended the applicant should be also attached. And if a regular printed certificate form was required with detailed answers to a sufficient number of questions to ascertain fully the financial standing of the applicant, few but those entitled to free attendance would get admission to the hospitals. As to those of moderate means requiring the conveniences of the fully equipped hospital, wards connected with our general hospitals, or private hospitals with accommodation at rates corresponding to the financial capabilities of applicants would seem to meet the difficulties.

PUBLISHERS DEPARTMENT.

OLD REMEDY—NEW USES.

There are very many important uses for Antikamnia, of which physicians as a rule may be uninformed. A five grain Antikamnia Tablet prescribed for patients before starting on an outing, and this includes tourists, picknickers, bicyclers, and, in fact, anybody who is out in the sun and air all day, will entirely prevent that demoralizing headache which frequently mars the pleasure of such an occasion. This applies equally to women on shopping tours, and especially to those who invariably come home cross and out of sorts, with a wretched "sightseer's headache." The nervous headache and irritable condition of the busy business man is prevented by the timely use of a ten-grain dose. Every bicycle rider after a hard run should be advised a bath and a good rub down, and two five-grain Antikamnia Tablets on going to bed. In the morning, he will awake minus the usual muscular pains, aches and soreness. As a preventive of the above conditions, Antikamnia is a wonder, a charming wonder, and one trial is enough to convince.

CANADA
MEDICAL RECORD

JULY, 1898.

Original Communications.

WHAT CLASSES OF INJURIES TO THE HUMAN BODY DEPENDENT ON VIOLENCE ARE CAUSED BY ALCOHOLIC EXCESSES.*

By THOMAS H. MANLEY, M.D., New York.

Professor of Surgery at the New York School of Clinical Medicine, Consulting Surgeon to Columbus Hospital, to Fordham Hospital, Yonkers Hospital for the Aged, Staten Island Hospital and Yorkville Infirmary for Women.

Anyone who has had a surgical service in a general hospital well knows that among adults a considerable proportion of the cases coming under his care, of a grave traumatic character, are either immediately or remotely the result of that curse of mankind, the excessive indulgence in alcoholics.

In order that we may the better appreciate how the lethal effects of alcohol operate in these cases it becomes necessary that we should first understand what the pathological action of this chemical is.

MODE OF ACTION ON THE CEREBRO-SPINAL SYSTEM, ON THE BRAIN AND SPINE.

Alcohol in large or repeated doses simultaneously acts on the brain and spinal cord, with varying intensity and manifestations in different individuals, and in the same individual, under various circumstances.

EFFECTS ON THE BRAIN.

Its most constant and unvarying property is to weaken the will power and the faculty of reflection and judgment.

*Read before International Temprance Congress at Prohibition Park, Staten Island, N. Y., medical session of the American Medical Temperance Association.

Loss of control of impulse and perversion of the reasoning faculties are always among the more dominant features of alcoholic intoxication. Carried to an extreme degree, the unbridled frenzy of passion is set loose, reason is dethroned, and the man or woman is an irresponsible maniac.

EFFECTS ON THE SPINAL NERVES AND NERVES OF SPECIAL SENSE.

Alcoholic libations carried to the point of inebriation act with great energy on the nerves of special sense and the spinal.

Vision is dimmed, hearing is obtunded, anesthesia sets in, the reflexes are palsied and ataxia of the voluntary muscles is always present when full inebriation is reached. Finally when very large quantities of intoxicants are imbibed, ataxia or want of muscular control is succeeded by the unconscious state and paralysis.

From the foregoing very brief and incomplete account of the toxic and paralyzing action of alcohol on those central ganglia which preside over all the mental actions of man, and on the nerves which animate function and vitalize muscular action, it becomes at once evident that the category of accidents and of physical injuries, trivial, severe or mortal, sustained or inflicted under alcoholic passion, paresis or paralysis, must, indeed, be of diverse and colossal proportions.

Sundays and holidays provide the hospitals with a large crop of surgical cases, the primary etiology or cause of which is alcoholic imbibition.

Murderous wounds, as stab, gunshot and concussive, are inflicted under the frenzy of alcoholic excitement; fractured skulls, dislocated joints, broken bones, bruises or lacerations of the soft parts occur from the same cause, or from loss of or imperfect control of the muscles. Probably, if the full truth were known, the immoderate use of alcohol is responsible for the greater number of serious collisions of the trolley car, the bicycle or vehicle, especially on Sundays and holidays.

In my own experience, in an active surgical service in hospitals, I am satisfied that alcohol is responsible for the great preponderance of grave surgical cases on the non-working days of the year.

With a man's faculties blunted and his powers of locomotion but imperfectly under control he is oblivious of danger, and when it is impending is not always able to escape it, and therefore we marvel, not why there are so many accidents, but why there are so few.

Alcohol augments the mortuary list in extremes of climate or season. In the summer a large number of the most serious cases of insolation ensue through over indulgence in alcoholic beverages.

As the fierce rays of the sun beat down on the unfortunate victim he becomes conscious of a sense of oppression, when he resorts to a "bracer," probably in our time and country, to cool lager, ale, or some of the fabricated "cocktails." A temporary sense of exhilaration follows, the libation is repeated again and again, until the lethal action of the stimulant and the intensifying effects of caloric overwhelm him. Perchance the victim may drag himself to his home or into some byway before he sinks into unconsciousness.

The resources of art can do but little for these cases, because the medical attendant is confronted by a mixed pathological state; the caloric fever may be readily reduced, but the system is surcharged with a poison which we may not be able to eliminate.

Many of the worst falls and frostbites in winter result from the alcoholic state. One drinks and drinks of pungent stimulants "to keep warm," as is said, or rather to benumb the sensory nerves; but the depressing influence of the freezing blast is in no manner mitigated, and alas! should the unfortunate in his stupid state step aside to some sheltered place, the sleep of death may set in to close the scene. In less grave cases the anaesthetic action of alcohol so obtunds sensation that while the free drinker enjoys a most grateful sense of comfort, his hands or feet may be frozen stiff.

THE EXCESSES OF ALCOHOLICS AND PATHOLOGIC SURGERY.

Excesses in alcoholics lead to the necessity of surgical intervention only through their influence on the nerve centres, deranging the mind and inhibiting or enfeebling nerve conduction; never by any specific or local action on an organ or structure.

This has long been noted, although every one knows that confirmed drinkers are bad subjects for surgical operations, as shock, collapse or delirium follows with them in a far greater ratio than in the temperate or total abstainer.

In forensic medicine the influence of alcoholic excesses is given extensive study. That phase of it which deals with traumatism or injuries is of special concern to the surgeon or practitioner, because in so many instances his testimony is often mainly depended on, when the question of responsibility or irresponsibility is raised. A man is found on the sidewalk or roadside with a fractured skull in an unconscious state; one has sustained a fatal stab wound, has been crushed by the street cars or has committed a homicide or attempted suicide. In these and many other similar cases the proof of the presence or absence of alcoholism is often of the greatest importance. Especially is this so, since the confirmed alcoholic habit has come to be regarded by many of our most eminent alienists as a disease which renders the afflicted as irresponsible agents. This view of late years is coming to be recognized and shared by the Courts, who regard a homicide acting under alcoholic influence as temporarily *non compos mentis*.

THE APPLICATION OF TREATMENT IN THE INEBRIATE STATE.

The question arises, should we ever, while one is grossly intoxicated, take advantage of the anesthetic state to manipulate parts carefully with a view of clarifying diagnosis, or even perform a surgical operation?

For the former, certainly, but the latter in some instances is doubtful.

While one is intoxicated dislocations may be reduced or fractured bones set, but if a limb is so mangled that the question of amputation is raised we have no right to proceed and sever the limb until reason is restored and consent is given.

THE RECOGNITION OF THE INEBRIATE STATE IN THE INJURED.

The above aspect of the alcoholic question is one of important consideration in many medico-legal cases. Our

late lamented *confrère*, the distinguished New Jersey surgeon, Dr. Isaac N. Quimby, came to his death through the severe strain and exposure incurred while defending himself against the extortionate claim of a tenant who sustained an injury on his premises, while it was alleged she was in an intoxicated state.

These civil actions in our time of popular government and a political judiciary for every conceivable sort of an injury, imaginary or real, are becoming so common and so oppressive that the owners of property are in constant peril of having their small inheritance or perchance the earnings of a lifetime swept away by a single suit for damages.

Was the plaintiff intoxicated at the time of injury, was it then through contributory negligence, and, if so, death resulting, what *rôle*, if any, did the alcoholic state play as a factor in causing it through its operations on the system?

These questions are often very difficult to answer, indeed, although under many circumstances we may gain much valuable knowledge by a proper investigation and a critical examination of the injured. Caution must be observed, however, that in our connection with the case an error may not be committed and injustice imposed.

For example, it is a very general custom with the laity, when one suffers from syncope or shock, from any cause whatever, to at once administer alcoholics with an unstinted hand.

Hence, should one have lost much blood or be very young, a comparatively small quantity of liquor may produce marked intoxication.

It is my experience in hospitals that there were few patients admitted with fractures of the limbs who had not been given alcoholics before they were sent in. But in these it is not exceptional to observe positive symptoms of intoxication unless there was evidence of free drinking before injury.

But in quite a few of them injured, when we see them early, they are boisterous, hilarious or unmanageable and present other indubitable evidence of pre-traumatic intoxication.

If we are in doubt, then, we should note the odor of the

breath, the state of the pupils, the condition of the reflexes; besides, if the patient be in a conscious state, press for accurate information from himself if possible.

My own experience has been that when one has been injured in the sober state if we interrogate he will explain how it occurred without difficulty. The drunken man may tell us he has been drinking, but how he was injured is often a blank to him, and he can throw no light on it.

THE EFFECTS OF ALCOHOLIC EXCESSES ON REPARATIVE PROCESSES AFTER INJURIES.

Hard drinkers rally badly from deep shock. They are prone to delirium tremens after severe operations and injuries, and are very much more liable to septic infection after lesion of the soft parts through the deteriorated state of the blood and tendency to diabetes.

Complications with them, as pneumonia, nephritis and diarrhoea, are common. Their tissues are more vulnerable; congestion tends to run into inflammation; this spreads into heterogenous structures, often running a chronic course. These cases are characterized by a malnutrition or defective tissue metabolism, imperfect assimilation and defective elimination, all of which makes an impression on the integrity of the machinery of man when subjected to any violent shock or disorganization.

SOME LEADING EUROPEAN GYNECOLOGISTS AND THEIR WORK.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., England, Montreal, Can.

My last letter described very briefly what I saw in Paris; this letter will speak of some well-known gynecologists in Florence, Vienna, Prague, Dresden and Berlin.

Pestalozza, of Florence.—Having heard that he was doing a large amount of good work, I left the beaten track and went to Florence to see him. He received me most courteously, and invited me to come next morning, which was Sunday, at 7 o'clock, to see some operations. He has an immense clinic, being in charge of 40 gynecological and 80 obstetrical beds. Ten of the latter are reserved for isolating infected cases coming from outside. Among his own

cases he has had no death from sepsis since several years. The first operation was abdominal hysterectomy for multiple fibroids in a woman who had also prolapse of the vagina; he left a small portion of the cervix to which he afterwards stitched the upper part of both broad ligaments in order to draw up the vagina. He used isolated silk ligatures for the two ovarian and two uterine arteries, and he operated very quickly. The silk was prepared by first soaking it for 12 hours in ether to extract the fat and then sterilizing it in steam for 2 hours, after which it remains indefinitely in 2 per 1000 sublimated alcohol. As it appeared to be particularly good, I took down the address of the manufacturer : Bouti, Silk Manufacturer, Porta Rossa, Florence. He afterwards removed a cervix which had been left after hysterectomy two years before, and which had now become cancerous. Some of the old silk ligatures were found encysted and calcified. He then took me over to his hospital, and showed me about 20 patients convalescing from laparotomy. I would strongly advise those who intend to visit gynecological clinics in Europe to spend a few days with this talented gentleman.

Schanta, of Vienna.—During my short stay I was unfortunate in not seeing him operate, but this was amply compensated for by seeing his first assistant, Dr. Schmidt, perform a vaginal extirpation of the uterus and appendages for pyosalpinx. He opened the anterior vaginal fornix first and then the posterior, sewing the peritoneum carefully to the vaginal edge in order to avoid hemorrhage, after which he placed just six silk ligatures in the broad ligaments completely controlling the bleeding, of which there was almost none. By cutting off the lower half of the uterus he obtained more room for the difficult task of detaching and bringing down the densely adherent appendages. I spent another profitable morning with

Dr. Gustave Kollischer, recent assistant to Professor Schanta, who is quite celebrated for his work on the bladder. He catheterized the ureters, and gave me a fine view of the bladder with the catheter in the ureter, by means of his cystoscope, which is a modification of Nitze's and Brenner's. I was so pleased with its easy working after seeing it used on several cases that I procured one at Leiter's instrument

maker, Vienna. It has many advantages over examination by speculum, the principal one being that it does not require any dilation nor external light. All you have to do is draw off the urine, fill the bladder with clear warm water, introduce the cystoscope and touch the button for connecting the current from a little 5 cell battery, when the whole of the bladder is beautifully lighted up and the smallest foreign body as well as the openings of the uterus can be easily seen. There is a small channel adjoining the optical apparatus through which the elastic bougie is passed and can be guided into either ureter. He also showed me a beautiful little curette for removing granulations and also little scissors for cutting off polypi and forceps for seizing calculi. He told me that he had removed several wandering silk stitches from the bladder, which had ulcerated into it after laparatomies and vaginal fixations.

Pawlik, of Prague, received me very kindly, and put me in a good humor by mentioning many of my papers. Speaking of electricity he said he had employed Apostoli's method in a great many cases and with very good success in arresting hemorrhage, in diminishing the size of fibroids and expelling some of them from the uterus, but he had given it up because he could not be sure of the result in any given case. He removed a large ovarian cyst by the abdomen, using catgut for ligature and burning instead of cutting off the tumor in order to avoid adhesions to the bowel and also to lessen risk of sepsis. He closed the abdomen with two rows of buried catgut and a third of superficial silk sutures. He prefers the abdominal route for ovaries and pus tubes. I saw them using 3 per cent. of icthyol in glycerine in the out-patient department. Pawlik is a great linguist and speaks English, French and German perfectly besides three other languages, but what he excels in is catheterising the ureters. He showed me the instruments which he used twenty years ago in Vienna, where he told me the proceeding was employed for the first time, and by him. His skill in using the ureteral catheter is wonderful; he seemed to introduce it into the bladder and up into the ureter with one gliding movement. No dilator; no endoscope; no artificial light; not even by sight, but merely by the sense of touch.

I asked him to measure the catheter, and it was found to be 32 centimetres long. In a case of pyonephrosis he first injected 200 grammes of water to distend the bladder and then introduced the ureteral catheter and injected 130 centimetres of 1-3000 nitrate of silver solution, which he gradually increases after some days to 1-1000. Sometimes he uses sublimate solution. The patient told him when her kidney was distended, and on removing the rubber pipe the solution spurted out of the catheter. On making intermittent pressure on the kidney the liquid could be made to spurt out in jets. He also showed me the woman from whom he had removed the whole of the cancerous bladder.

Leopold, of Dresden.—As my train did not get in until 9.30 a.m. and I did not reach the hospital until 10, I was too late to see him operating, which he begins every morning at 7 o'clock. He is a firm believer in total extirpation of the uterus whenever both ovaries and tubes are severely diseased. He gave me his recent paper on the results of 67 such cases, with a mortality of one and a half per cent. Also another paper giving results of 100 cases of removal of the uterus by the vagina for myoma; with a mortality of four per cent.

Olshausen, of Berlin.—I studied under him 10 years ago, and was pleased to see that he had not aged at all since then. He gave me a kind welcome, and invited me to an operation next morning at 8. When he has several operations he commences sharp at 7, so one has to rise at 5.30 or 6.00 to be there in time. The case was a woman of 65, who had a bleeding polypus, which on removal and examination a few days before was found to be cancerous. He opened the two pouches and sewed the peritoneum to the vagina. He used nothing but catgut throughout, but he always ties three knots on the arterial ligatures. The ligaturing of the broad ligament was greatly facilitated by his having the best needle I have ever seen, known as Olshausen's "Untenbiudungsnadel," and much superior to Deschamp's. As he trusted entirely to catgut, I asked him how it was prepared: 1st. Soaked for 6 hours in sublimate water 1-1000; 2nd. The water is removed by soaking for 24 hours in sublimate alcohol 2.1000; 3rd. Matured for several months in absolute alcohol and used

directly from that. After the operation he took me over his wards and showed me a great many cases convalescing nicely from laparotomy. In the latter he closes the abdominal wound with four layers of catgut in fat patients or three in thin ones. He objects to through and through silk worm gut for fear that it will lead pus into the peritoneum; although another operator, Landau, told me of a woman having died on the 16th day, owing to being closed up by layers of catgut; the pus could not get out, and so broke into the peritoneum, which would have escaped to the skin if she had been sewed up with through and through stitches. Olshausen dresses the abdominal wound with a very little iodoform and a single little strip of gauze over which collodion is painted, so as to completely seal the wound, and this remains undisturbed for 12 days. I saw several of these first dressings removed and they looked very well; the catgut was all absorbed and the knots could be brushed off. As I thought that the buried catgut would cease to hold the wound after a few days, I asked him if he ever saw hernias? He replied that they would happen in spite of any method of suturing. I told him that I used silk worm gut and left it in a month, He does ventrofixation by passing a silk worm gut stitch around each round ligament near the uterus and fastening it to the abdominal fascia and having it buried there. I saw him introducing a pessary and sending a woman away who was brought for operation with a freely removable retroverted uterus, which he first replaced. Next day he did abdominal section for an ovarian tumor with twisted pedicle, and another case of pus tubes and ovaries also by the abdomen, taking great care to wall up the bowels with quantities of sterilized gauze.

No one here flushes the abdomen with water, and they have also abandoned constant irrigation in vaginal work, using instead great numbers of little gauze sponges, which are thrown away as fast as used. Olshausen did not remove the uterus, but carefully closed all bleeding points and left it in. On the walls of the operating room he has two cards: NOLI TANGERE and FAVETE LINGUIS. He told me he was going to get another one with "not to expectorate" in Latin. He showed me two cases of eclampsia, of

which he has about 60 a year, sometimes as many as six at a time. As is well known, he is the first authority in Germany on Obstetrics, and is accoucheur to the Empress.

Martin, of Berlin, still stands at the top of the Gynæcological ladder in Germany. He operates at his private hospital every day at twelve, which is a great boon for visitors, as it enables us to see two or even three other operators each day, and he did two or three a day during the whole week. The first was a vaginal hysterectomy for cancer of the cervix, using catgut for the broad ligaments. It would have been a very difficult case for any one else, but was quite easy for him. The second case was vaginal fixation in a lady who had been wearing a pessary for retroversion for many years without being cured. He is the quickest operator I have ever seen, only taking ten minutes for this pretty operation. The same running catgut suture went through vagina and peritoneum, and the fixation stitch was of catgut. The third case was one of cystic ovaries in which he opened the abdomen by the vagina, brought out the ovaries, found them diseased, removed four-fifths of them and carefully sewed up the remainder with catgut, and put them back again. After closing the vaginal incision he did an anterior and posterior colporrhaphy on the same patient. Next day he did vaginal hysterectomy for a small fibroid, which was difficult on account of the senile attresia. I made particular inquiries whether he had ever known of a case of post operative hæmorrhage, and he replied not for several years, because they tied it tighter. Next day he did two vaginal fixations for retroversion with fixation. He was greatly aided by an instrument I have never seen before, consisting of a forceps, the posterior blade of which was a stout uterine sound, and which being introduced was used as a lever to lift the uterus forward while he was opening the vesico-vaginal plica or fold. He then detached the appendages and removed them, and, after carefully closing the torn surfaces on the back of the fundus, he attached the uterus at the level of the internal os to the vaginal wound. The bad results of pregnancy following the operation in the early cases to fastening the top of the fundus to the vagina, the uterus thus being held upside

down. In another case he brought out the appendages, emptied some cysts in the ovaries and replaced them and then did vaginal fixation. The next day I saw him cauterizing an inoperable cancer with a very pretty electrical cautery made by Hirschman, 15 Johannis Strasse, Berlin. It consisted of a sharp porcelain tip, heated by platinum wire, and was supplied with current from a small storage battery not larger than a cubic foot. It was quite portable, and only cost $60, including a cystoscope and a head lamp for operating on dark days.

Landau, of Berlin, is one of the leading teachers there. He is assisted by his brother, and he has a large and handsome private establishment in the Phillip Strasse, near the Charité. The pathological department is looked after by Dr. Pick, who speaks English fluently. He has a beautiful method of preparing specimens, which are first hardened in 4 per cent. of formaline and then stretched on wire netting. They have the specimens of every case, both macroscopical and microscopical, from whom they have removed anything, even down to curettings and vaginal discharges, systematically indexed for ready reference. I have never seen anything like it anywhere. Dr. Pick gives a course of microscopy to physicians. I saw Landau remove large double ovarian tumors, which Dr. Pick took sections from and mounted and stained while the operation was going on, and showed us in a few minutes carcinoma. Landau used silk to tie the pedicles and through and through silver wire for the abdomen. Another day I saw him remove pus tubes by the vagina in a case of retroversion with fixation. He split the uterus up the middle with his scissors, and after digging out the pus tubes he put two or three clamps on the broad ligament on each side and cut them off. I was very favorably impressed with the method in this case. But immediately afterwards he did another patient in whom the pus tubes were much higher up in the pelvis, and he had tremendous difficulty in getting them out by the vagina, and I felt sure that he could have done it much easier by the abdomen.

Duhrrsen, of Berlin, seems by common consent to be acknowledged as the ablest among younger men of note.

He is not much over forty, but his large private hospital at 25 Schiffbauerdamm, filled with important cases and maintained at his own expense, testify to his ability and energy. He received me most courteously, and patiently answered my very numerous questions. He showed me a patient from whom he had removed the uterus by the vagina for hæmorrhage due to hæmophilia, which interested me particularly because three years before she had come to him for the same thing and he had employed *Sneguiroff's* steam cure, which cooked the mucous membrane so well that she did not menstruate at all for three years. He kindly set it going for me. It is a little boiler fitted with a thermometer, so as not to let it get hotter than 120° Centig., and the steam is conveyed into the uterus by means of a double catheter during a quarter to four minutes. The cervix must first be thoroughly dilated, and there must be a rubber tube over the steam pipe so as not to burn the cervix, which would cause a stricture. He is an enthusiast for vaginal laparotomy, and claims to be the inventor of vaginal fixation for retroversion, he having published his first fifteen cases before anyone else published one. I was very much opposed to the operation before coming here, but since I have seen Duhrrsen doing three in an hour, as well as several other operators doing it very quickly, and after hearing its manifest advantages, I have been most favorably impressed withwh at I have seen of it. He opens into the peritoneal cavity in two minutes or less, hooks out the ovarian tubes and uterus, destroys all cysts by ignipuncture, replaces them, passes a silk-worm gut ligature through vagina, into peritoneum, uterus, and out again on other side through peritoneum and vagina. This is left untied until he has sewed up the opening in the peritoneum with a running catgut and the vagina with another row of catgut, after which the fixation ligature is tied. I made many inquiries about Alexander's operation, but nobody here does it. When I told Olshausen that I could generally find the round muscle with my eyes shut he invited me to do the operation on a case, but, on examination, her uterus was found to be fixed and therefore unsuitable. Next day I saw Duhrrsen remove the vermiform appendix and double pus tubes by the abdomen, which he does in about 25 per cent., and by the vagina in 75

per cent. Next day he removed a pair of very angry gonorrhœal pus tubes by the vagina. There was recent peritonitis. As she was a young woman, he left the uterus and one ovary. This was a very nice case, as he did it very quickly and all outside of the vagina.

Mackenrodt, of Berlin, is one of the coming great men, if not already one. He appears to be under 40 years of age, and is a fine operator. I saw him doing a Cæsarean section and subsequent total extirpation of the uterus for cancer. The child, about 8 months, was taken out alive and did well. There was hardly any bleeding. As soon as the child was removed through the opening in the uterus he put on two ligatures on each side and a few temporary ones on the uterine side and cut between them until he came to the uterine arteries, which he tied. He then separated the bladder and freed the uterus until he had it and the vagina like one tube, free almost to the vulva. He felt for the large cervix and cut the vagina below it, not with a knife, but with a large cherry red electrical cautery, his object being to prevent it from infecting the peritoneum. The current measured 17 amperes, and was obtained from the street. The asepsis of himself and assistants was most thorough, spending 20 minutes by the clock in disinfecting their hands. He and most of the operators here stand on the patient's left, so as to use their right hands.

Koblanok, of Berlin, is Olshausen's first assistant, whom I saw removing a large fibroid by the abdomen. The case was an easy one, but he did it beautifully.

Gusserow, whom I was anxious to see, did not operate while I was in Berlin. Neither did Nagel, his assistant.

In closing my letter from Berlin, I must truly say that I have seen more here in one day than I have ever seen in any other city, and I cannot speak too highly of the kindness with which I was received by one and all. Nearly every day I was up before six a. m. in order to get to Olshausen's by seven, and from there I went to Landau's, and from there to Duhrrsen's or Mackenrodt's, and from there to Martin's, where I remained till nearly two, by which time I felt that I

had seen enough for one day. As all these places are within a few minutes of each other, Berlin offers especial advantages for a post-graduate course. My next letter will speak of Sanger, Tweifel and Jacobs.

Selected Articles.

NEURASTHENIA.

By Prof GILLES, DE LA TOURETTE.

Hôpital Hérold,

To-Day we shall discuss an affection of which one hears so much, though it has been but recently added to our nosological list, viz., neurasthenia. I am not sure, however, that the term is very appropriate, for neurasthenia taken in its general sense is hardly a morbid entity; it is a condition, or rather a combination of conditions which must be distinguished the one from the other if a proper prognosis is to be made.

For instance, between the *true neurasthenic condition* and the *constitutional neurasthenia* described by the late Professor Charcot, there exist differences so considerable as regards their evolution that it behoves one to attribute to each a particular significance. In spite of common symptomatic expressions which help to confound them both under the same description, consequently I am of opinion that the question of neurasthenia is much less simple than is generally supposed, and to solve this somewhat serious problem, the physician should bring all his attention to bear on the case before him.

Before sketching a general description of the affection, it is indispensable to enter into some details of its history.

As you may already know, it was Beard, of New York, who first drew the attention of the medical world to neurasthenia (nervous exhaustion) in a paper published in 1869, in one of the medical journals of Boston. At the time little or no notice was taken of it. Nine years later, however, he read a paper on the same subject before the Academy of Medicine of New York, and in 1890, he published a book in which he gave a succinct description of the affection. Still later Beard produced a work on sexual neurasthenia, which has been translated into French. Although I concede to our American *confrère* the honor of being the discoverer of neurasthenia, yet it cannot be denied that the works of Erb and Arndt, in Germany, of Playfair in England, and Professor Charcot in France, had anticipated this nervous condition, and inspired by these authors and by my observations, I lay before you to-day a description as complete as possible of the nervous exhaustion of Beard.

Neurasthenia is an everyday affection that you can observe at the hospital, either in the pure state or associated, as frequently

happens, with other morbid distinguishing features. It is especially in private practice, however, that you will meet it under its different aspects, among patients who work more mentally than physically, although among all classes of society, the hereditary or constitutional form is to be met with. You will meet it in adult men and women, but not in children, unless in a modified form of hereditary condition. Everything that tends to depress the physical and moral elements is susceptible of provoking neurasthenia. The description I am about to give you is full of difficulties, and would have been more so if Charcot in his masterly study of the subject had not done for neurasthenia what he had previously done for hysteria. He extracted from the complex symptoms a certain number of important signs to which he gave the name of *stigmata*, a knowledge whereof is of essential importance as they are always found more or less associated in the neurasthenic conditions.

These stigmata are of psychical and physical orders, physical especially, and that fact renders their interpretation the more difficult.

One of the most frequently observed of these signs is *headache*. Lafosse in his thesis recorded it forty-one times in forty-five patients. It consists of a pain which appears in the morning on awakening, and ceases, or becomes considerably attenuated, at night, and inversely to what has been observed in other headaches, it is always relieved at meal time, but returns with intensity during the process of digestion. There are, however, patients who seem to suffer continually, provoking a mental condition which I will describe presently. The headache has two points of predilection; it is either bi-temporal, squeezing the head as if in a vice, or, more frequently, affecting the occipital region, embracing the posterior region of the cranium like the helmet of Minerva, hence the name of *galeati* that Charcot gave to these patients. Frequently a kind of crackling sensation is said to be felt in the back of the neck, and the patients will ask you to put your hand on the spot in order to confirm their assertion. The cause of the phenomenon is altogether obscure, and you will do well to accept the fact without trying to explain it. I have already said that the headache ceased or became attenuated when the patient went to bed, but it does not follow the *sleep* of neurasthenics is of the best, on the contrary, insomnia is the general rule. After the evening meal the patients are seized with lassitude and a desire to sleep. Immediately they lie down, they fall into a dead sleep without dreams or nightmares, in contrast with what is observed in hysteria. But this sleep rarely lasts beyond two or three hours. They awaken towards midnight, then commences a most painful period of insomnia. They become agitated, turn from sids to side, complain of lancinating pains in their limbs, pruritis, and a numbed sensation in their arms, which troubles them considerably. These phenomena subsequently disappear, and after a short time return again, and so on during the rest of the night. Towards morning they fall into a troubled sleep, and finally awaken more fatigued than when they laid down at night.

Another stigmata is *vertigo*. This phenomenon presents certain characteristics that you ought to know. It is a sensation of empti-

ness in the head, accompanied by weakness in the lower limbs, which makes the subject totter at times in walking. A mist comes over the eyes, everything seems to turn around, and distant and near objects are confounded in the same plane. This vertigo is felt in the morning on awakening, and like the headache, is relieved at meal times. It disappears generally in the evening, and is not felt at all in bed. A third stigmata is a pain in the back at a point corresponding to the articulation of the sacrum with the last lumbar vertebra. The patients complain of a kind of paresis in the legs simulating paraplegia. To these troubles of the general sensory apparatus become joined diverse perturbations of the great visceral functions of the economy, in which those of the digestive functions take the first rank. That which predominates generally in the neurasthenic, is a torpid and difficult digestion, especially after the two principal repasts of the day. The light (French) breakfast taken in the morning causes no trouble; on the contrary the patient feels better in every way after it, as I have already remarked. It is even necessary that the second repast should not be too late, otherwise a dragging sensation is felt at the pit of the stomach, yawning takes place, and a general lassitude seizes the individual. The neurasthenic, in fact, requires to eat often, though little at the time, for the appetite is replaced by a sensation of want, which must be satisfied. Unfortunately, such patients do not observe this rule, their midday meal is generally too abundant, and although the repletion of the stomach seems to give relief, that relief is of short duration. In a few minutes they will complain of a painful sensation in the epigastrium, a physical and intellectual torpor, tympanism, acid regurgitations, in short, all the signs of dyspepsia. After a few hours of more or less suffering, the neurasthenic gets relief, until he eats again. These digestive troubles influence materially the functions of the intestines. Some patients suffer from obstinate constipation, others from diarrhœa, but it frequently occurs that each of these troubles alternate in the same individual. It is not surprising that the general condition of the patient suffers from this state of things; nutrition languishes, and, although in some cases the embonpoint is preserved, it more freqently happens that the person loses flesh; the features are drawn, and the complexion becomes sallow.

The urinary function is not less disturbed; at one time the secretion is clear, limpid, and abundant; at another it is much less abundant, and high-colored. The quantity of urea is generally small, but phosphaturia is constantly present, indicating an exaggerated elimination of the elements which the nervous system requires for its normal function. Neither sugar nor albumen exist in the urine.

The heart is more or less affected by this general disturbance of the functions of the organism. The arterial pressure is always low in neurasthenics between meals, but under the influence of digestion it becomes exaggerated. Hence, the rapid pulsation of the cephalic arteries and the congestion of the face so frequently complained of. Besides this habitual condition, it happens frequently that the central organ of the circulation is the seat of symptoms bearing a strong analogy to angina pectoris, with this differ

ence that the pulse, instead of being small and intermittent, is full and regular.

The genital functions are also affected by the general depression. The physiological act can be accomplished, but it is almost always followed by a sensation of extreme fatigue, so that complete loss of sexual desire is frequently the result.

I will close this long nomenclature of the physical symptoms by drawing your attention to a peculiar tremor frequently observed in persons suffering from nervous exhaustion. It consists in small oscillations affecting the lower and upper limbs. The mental state of these patients is important to note, for the affection is in reality of psychical origin. The cerebral activity is considerably diminished. All intellectual occupation is a burden, but none of the faculties are perverted. The neurasthenic is capable, if he makes an effort, of recovering the plenitude of his faculties, but finds it difficult to come to a decision in any affair that requires prompt action. However, no matter how prolonged this state may be, it leads but rarely to mental alienation.

I think, that now, after exposing all these elements in the diagnosis of neurasthenia, you will have a fairly correct idea of the interesting affection. In another lecture I will enlarge on the diagnosis, and discuss the treatment.—*The Medical Press*, March 9, 1898.

THE CENTRIFUGE AS AN AID TO DIAGNOSIS; WITH A DEMONSTRATION OF THE URINE-SEDIMENTOR, HEMATOKRIT, AND THE SPECIAL APPARATUS FOR THE EXAMINATION OF MILK AND SPUTUM.*

By HENRY P. DE FOREST, M.D., Brooklyn, N.Y.

A short time ago I was asked by one of the members of this Society to make an examination of the blood and urine of a patient of his, a young woman who had recently come to the city from her home in the West Indies. Chyluria was a marked symptom, the urine looking like yellowish milk, and the existence of the *filaria sanguinis hominis* was suspected. No sediment was deposited from the urine after standing, for the chyle was, of course, of lower specific gravity than the fluid in which it was emulsified. Ordinary filtration was of no avail. Some other method was, therefore, required in order to clear the urine and separate the parasites, if any were present. In the examination of the blood another difficulty arose from the fact that the parasites are usually few in number and appear only at night. My efforts to overcome these obstacles led me to investigate the centrifuge as an aid to diagnosis, and it occurred to me that the information upon

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the subject gathered from a variety of sources would be of sufficient interest and possible assistance to others to justify its presentation before this Society.

Centrifugal force has been recognized for ages, and for many years its mechanical effects have been utilized in the arts and sciences. The centrifugal clothes-drier used in steam laundries and the separation of cream from milk by centrifugation in large dairies are examples of its practical value. In sanitary work it is used to facilitate the analysis of numerous samples of milk, and to determine the sediment in potable waters. Still more recently special forms of apparatus have been devised for strictly medical work.

In this last-mentioned field of usefulness the centrifuge was first used to separate the solid ingredients of urine. Next, the principle was applied to the examination of the blood. When the scientific diagnosis of pulmonary tuberculosis was found to depend upon the presence or absence of the tubercle bacillus in the sputum the aid of the centrifuge was again invoked. Last of all, with the introduction of more accurate methods of infant-feeding, the analysis of mother's milk has been aided by its use. Other forms of analysis might be mentioned, but as these four fluids are the only ones up to the present time for the examination of which special forms of apparatus have been devised, I will confine myself to their consideration.

Apparatus.—Before speaking of the technic involved in these processes, it will be necessary to describe the forms of apparatus that are now available. These vary in construction according to the motive power employed.

The pioneer centrifugal machines were put in motion in much the same way as a boy spins his top. A heavy rimmed wheel, from one to two feet in diameter, fitted with spring clips to hold the tubes, and enclosed in a tight-fitting thin metal cover to diminish air resistance, was supported horizontally upon a thin vertical spindle. This spindle was held in cone bearings at its upper and lower end. The fluids to be examined being in place and the cover fastened down, a long cord was wound tightly around the spindle, and then quickly withdrawn. The wheel with its heavy rim would spin for several minutes, and then, if desired, the process could be repeated.

Another form had a system of gears connected with the spindle by a simple interlocking device, and was set in motion by means of a hand-crank. When the highest possible speed was secured the gears were disconnected, and the wheel allowed to run down as before. A well-constructed machine would often run fifteen minutes.

Machines of these types were in vogue in Vienna in 1891. They were efficient and fairly satisfactory for hospital purposes, but had some disadvantages. They were very heavy and bulky, and their velocity was greatest at the beginning of the process, and steadily decreased until the wheel stopped.

Other machines of large size were soon constructed for hospital and laboratory use. The wheel was as large as before and similarly placed. It was made of a solid plate of metal about an inch in thickness. Just within the periphery a number of slots were cut an inch apart, and each corresponding in its long axis with the radius of the wheel. The milk, urine or water to be examined was placed in a glass tube within a metal protector. These protectors were supported on paired pivots which rested in notches cut in the upper walls of the slots. Water, steam, gas, or electricity was used as a motive force, and as the rapidity of revolution increased the tubes swung into a horizontal position, and were quite concealed within the thickness of the wheel. Air resistance was thus reduced to a minimum, and great economy of power gained.

For use in places where the Edison current or galvanic or storage batteries can supply power, two forms of electric centrifuge are now manufactured. They require for their proper use a suitable rheostat, and proper connections. By this means the amount of current can be regulated and the rapidity of revolution be so adjusted as to secure the best results with any given fluid. Such instruments are of great value in hospitals or laboratories where a large number of examinations are made daily. They are practically noiseless and economize time and strength. On the other hand, they cannot be taken to the bedside, and are thus of little use for the examination of the blood, since such an examination must be made before there is time for coagulation. They are much more expensive than other instruments and they cost more to operate them. They are especially apt to be damaged if the current is too strong, and are, in general, more liable to damage.

The Purdy electric centrifuge was first in the field. It gives good results, but is needlessly heavy, the tubes strike against the base, and the motor is a poor one. Its price is $37.

A better centrifuge is the Heiman electrical centrifuge. Through the courtesy of Dr. Van Cott I am able to show the instrument itself. It has been used at the Hoagland laboratory for some time, and gives entire satisfaction. It is compact and well-constructed. It costs $35.

Still another centrifuge is on the market. It is handsomely mounted upon a mahogany case that encloses the motor. Its speed is not constant, and it is not recommended even by the manufacturers themselves.

For the general practitioner none of the centrifugal machines thus far mentioned is to be recommended. For his purposes the centrifuge of choice must have certain special qualifications. It must be compact and portable, and of as little weight as is compatible with ease of running, strength and durability. Its action should be as noiseless as possible. It should be easy to clean and to keep clean. If used for milk, water and urinalysis only, with a moderate effort it should develop 2500 revolutions of the spindle per minute; if for blood and sputum examination from the same effort 10,000 revolutions should develop. The length of the arm is of practical importance, since "the centrifugal force of two equal bodies, moving with equal velocity at different distances from the centre, is directly as their distances from the centre." In other words, the longer the arm the greater the centrifugal force which develops with the same number of revolutions. The urine-tubes should be so arranged that they do not strike the handle of the machine when it is at its highest point, nor should they strike against the standard when the motion stops. If this happens, the sediment is apt to be disturbed. The machine should be provided with a clamp, so that it may be easily and firmly fastened to a suitable firm support, and, by the way, a sewing-machine or typewriter-table makes an excellent one. Esthetics should be consulted in beauty of finish. Last, but by no means least, the price should be moderate.

I have succeeded in securing more or less satisfactory pictures of a variety of centrifugal machines. Like every other mechanical device, there is a choice. Some are superior in one particular, others in another. With each picture will be found a summary of the points just mentioned, and you can draw your own conclusions.

While these plates are being examined let us turn our attention to some of the practical details involved in the use of the centrifuge.

Urinalysis.—As is well known, the results obtained by allowing urine to deposit such solid ingredients as it may contain within a conical dish, relying solely upon the force of gravity for the rapidity of the process, and then examining the sediment with the microscope, is exceedingly fallacious. The reasons for this fact are very simple. No matter how much care is exercised in the collection of urine, it soon becomes contaminated with bacteria and fungi, always float-

ing in the air. These multiply rapidly, and by the time sedimentation is complete—that is to say in from twelve to twenty-four hours—numerous changes, due to decomposition, have occurred. The reaction is often changed. The crystals found are, for the most part, secondary products, and did not exist within the body at all. Sugar, if originally present, may have entirely disappeared, owing to the action of yeast-ferment. The more delicate forms of casts are also apt to decompose early. The fungi themselves may assume strange and unknown forms, and our final conclusions may be entirely erroneous.

All of these errors may be avoided by the use of the centrifuge; for with this instrument at our disposal we have a method of securing the casts, crystals and other solid ingredients in such a form that they can be examined at once—within five minutes from the time when the liquid is placed in the sediment-tubes. No chemical changes will have taken place, and the normal and pathologic elements can be easily determined.

For the proper precipitation of the sediment 2500 revolutions per minute for three or four minutes gives the best results. A higher speed than this is apt to distort or break the hyaline casts. The number of revolutions of the crank necessary to obtain this rate can easily be calculated with each machine, and with a watch at hand the desired result can be easily obtained.

The urine-tubes should contain a trifle over fifteen cubic centimeters. The lower ten cubic centimeters should be divided into 100 equal parts by accurate scale. The percentage of sediment may thus be read off. If the exact percentage of the chlorids, phosphates, sulphates, albumen or sugar is desired, the upper five cubic centimeters should be used for standardized reagents. If it is not convenient to carry bottles of liquid reagents, reagent-tablets are now to be had which give excellent results. A small urinometer can also be procured that will easily go inside one of the tubes.

The shape of the tubes is also important. Many of the tubes have a slight curve at the top. This makes them more convenient for pouring purposes, but care should be taken that they do not rest upon this lip when in the aluminum guards; the great strain upon the unsupported glass will often cause them to break. Neither should they be too long, for then they will catch within the metal arms when, during revolution, they become horizontal; when the motion ceases the urine will spill over the machine, the operator, and the floor, and the analysis of anything, except profanity, will be a failure. The simple, straight tubes give very good results.

If expense is not considered the tubes devised by Jacobi, having a bulb at the bottom like that of an urinometer, may be used. These favor the removal of the liquid, and collect the sediment well, but they break easily and are difficult to clean. They are, however, of great value in examining milk, urine or water for typhoid or tubercle bacilli, for the upper fluid can be poured off, and the contents of the bulb still further concentrated in the sputum tubes.

If the amount of sediment is small and it is desirable to increase it, the upper twelve cubic centimeters may easily be decanted after sedimentation, and as this is practically filtered may be used for chemical tests, while the tube is refilled with non-sedimented urine. In this way half a pint of fluid may easily be sedimented in a few minutes.

Whatever the size or shape of the tubes used, it is essential that they should each contain the same amount of urine. If this is not attended to, the distribution of the load will be so uneven that the machine will vibrate badly, and the spindle may possibly be bent.

Milk Analysis.—The centrifuge is of use in the analysis of milk. In the first place, it enables one to make a fairly accurate reply to the question, " Are there bacteria present in this milk ? " The means by which this can be accomplished has already been indicated.

In the second place, the determination of the amount of fat or cream that is present in any given sample of milk can be determined with greater rapidity and accuracy with the centrifuge than in any other way. To do this requires a special form of glass tube. Two forms are to be had. They are practically the same, the peculiarity of these tubes being that owing to the lighter specific gravity of the fat the scale used to indicate percentage must be at the upper end of the tube, and, in order that the scale may be easily divided, this end of the tube is much smaller than the lower part, and of uniform caliber.

Although the cream will separate by simple rotation, it has been found that for the accurate determination of percentages certain additional steps are required. The technic finally adopted is substantially as follows :

By means of a suitable pipette 5 c.c. of the milk to be examined is poured into the milk tube ; to this is added one centimeter of a mixture containing fifty parts by volume of hydrochloric acid, thirteen of methyl alcohol, and thirty-seven of fusil oil. Sulphuric acid of a definite specific gravity (1. 3) is then added drop by drop until the tube is filled to the zero mark. The mixture should be well shaken at each addition. The other tube is then filled in the same way, and the two

are rotated for three minutes at a moderate rate of speed (2000) revolutions per minute. The fat collects in the inner end of the tube, and when the machine is brought to a standstill the percentage can be read.

Very rich milk or cream may be diluted with one or four volumes of water before being examined, care being taken to multiply the result accordingly.

Sputum Analysis.—For the perfection of this method of concentrating the crystals, spirals and bacteria in sputum we are chiefly indebted to Drs. Ashton and Stewart, whose joint paper upon the subject was published in *The Medical News* in the issue of October 6, 1894. To quote from their valuable paper: "Undoubtedly the most important evidence that a destructive process is taking place in the pulmonary structure is to be found in the discovery of the elastic fibers in the sputum. For the purpose of demonstrating their presence and in the examination of the sputum for tubercle bacilli when these exist in very small numbers, the value of the centrifugal machine can scarcely be overestimated. Again and again have our observations demonstrated to us the facility whereby in such cases the presence of bacilli can be discovered by the aid of centrifugation, and in cases, too, in which, at the same time, they were found only after much trouble and repeated examinations by the ordinary methods. Such diagnoses, even, which were made after other methods had failed to detect the bacteria, have later been confirmed by the autopsy."

The technic for this procedure involves the use of certain special apparatus. The centrifuge must give a rotation of 10,000 revolutions per minute to secure good results with a sputum-tube carrier of the ordinary length, though with the very long-armed instruments already mentioned 5000 revolutions is sufficient. The tubes themselves are usually of the samelength as the blood tubes in order that the same frame may be used. The usual length is 50 millimeters, with a diameter of 2½ millimeters. Many tubes are simple glass cylinders ground smooth at the end, which presses against the occlusive pad. These tubes chip off around the edge very often in removing or in placing them in the frame. This difficulty is to a great measure obviated if the tubes are also ground around their terminal circumference for a distance of five millimeters.

The sputum to be examined need not be diluted in any way. It should be placed in a clean glass or porcelain dish and stirred with a glass rod till all flocculi are broken up and the sputum is of fairly uniform consistence. Then by means of a small pipette or medicine-dropper, with an inch or two

of rubber tubing at its end, the sputum should be drawn into the sputum-tube until it is quite full. A tube is then placed in each end of the carrier and centrifugation completed. The sputum will then be found in two layers: one clear, at the proximal end; the other opaque, at the distal end. The tube is removed, and slight pressure at the proximal end will suffice to expel the solid contents upon a cover-glass, where they can be fixed and stained in the usual manner.

Care must be taken with each examination to have the glass tubes quite clean, and it is better to provide a clean washer at the distal end of the tube for each examination in order that bacilli will not be carried over from one examination to the next.

Blood Analysis.—By far the best original work upon this subject, so far as the centrifuge and hematokrit attachment are concerned, has been done by a countryman of ours, Dr. Judson Daland. Dr. Daland's first article embodying the result of his researches was published simultaneously in German and in English in 1891, and has been the basis of a number of shorter articles that have appeared in various places and by various authors since then. The clinical studies were made in the wards by Professor Von Jaksch in Austria. He very soon found that the type of centrifuge then used in Vienna to which allusion has been made was not well adapted to his purpose, and it is largely to Dr. Daland's inventive powers that the attachment now known as the hematokrit was devised.

Since one object of the procedure was to do away with the necessity of using the hemacytometer for counting purposes, it was soon found that certain factors must be constant. The tube in which the blood is held must be of uniform caliber, must be graduated accurately, and must develop a constant quantity of centrifugal force dependent upon the distance from the centre of rotation and the rapidity of revolution.

The spindles first used made 104 revolutions per minute and for each turn of the handle. The tubes were 33 millimeters long and 1 millimeter in diameter. They contain 27.5 cubic millimeters of blood. On the outside is a scale divided into 50 equal parts. In his original article the author recommended that for convenience of computation these dimensions be modified so that the tube be 70 millimeters long and 5 millimeters in diameter, and provided with a 200 division scale. The tubes now manufactured are 50 millimeters long and 5 millimeters in caliber, and are divided into 100 equal parts. The tubes should rotate with a uniform velocity of 10,000 revolutions per minute. Most instru-

ments are now so constructed that a rotation of the handle 77 times per minute will produce this effect. These figures are of much importance, for, as the computation of percentages depends upon Dr. Daland's experiments, any variation in these factors would give widely different results.

At first the blood was diluted to avoid coagulation, and, though this now is rarely done, it may be well to remember that after a great variety of fluids had been used for this purpose a 2.5 per-cent. solution of bichromate of potash gave the best results. It does not decompose, it prevents coagulation, preserves the shape of the corpuscles, hardens them, and has a good contrast color. It can be used with the hematocytometer as well.

The technic is simple, but there are some minutiæ that should be borne in mind. Although the ear or ball of the thumb is recommended as the best places to puncture for the blood required, I prefer the little finger of the left hand as being the place most convenient and least likely to be noticed by the patient after the cut is made. The finger must be well cleaned, and rubbing it with a piece of cotton soaked in ether, just before making the puncture, is advised in order to remove all fatty material. These precautions may also prevent infection, which, if it occurs, is an annoyance.

The pin, the needle or the lancet may be used to make the incision. I have preferred to use a small, spear-shaped instrument. Recently, the question has been nicely solved by Dr. Veranus A. Moore, of Cornell University. The instrument devised by Dr. Moore is really a spring lancet, using a spear-shaped blade fastened to a spring trigger, and secreted in a small brass tube, the end of which can be adjusted to the depth of cut required. This he calls a hemaspast. It is particularly advantageous with children and nervous persons, who dread anything resembling a knife.

The tubes must be exactly filled, and this requires some little practice. A capillary tube 50 mm. long is closely connected with the blood tube by a rubber tube 1 cm. long, and with the mouth by a long rubber tube. This capillary tube acts as a window to show when the blood tube is filled, and also serves to prevent the suction acting too suddenly. When the blood tube is filled, be careful to place the finger tightly over its free end before removing the rubber. It will prevent displacement.

Centrifugate two tubes at the required speed for two minutes, read off the scale carefully (most tubes now have a magnifying index like a thermometer) and add five cyphers to get the number of red blood corpuscles. A black background is a help to read the scale.

When it is necessary to carry the blood away for examination, dilute with the bichromate solution and carry in the pipette used for counting white blood cells.

To clean the tubes, use water first, then absolute alcohol, and finally ether. If the pipette contains a large clot it should be filled with a concentrated solution of caustic potash or soda and placed in a test-tube filled with the same solution. In a few hours the clot is usually dissolved.

According to Daland, "The hematokrit gives results as accurate as, if not more accurate than, the Thoma-Zeiss hemacytometer, requires less skill, calls for no eye-strain, and the volume and number of red blood-corpuscles per cubic millimeter and the volume of white blood-corpuscles may be determined within ten minutes."

These, then, are the claims that the centrifuge has as an aid to diagnosis. That portion of the practice of medicine which consumes the greatest amount of time is diagnosis; after that basis is made thoroughly secure, prognosis almost speaks for itself, and treatment, although the most important part of the science of medicine, is, in most cases, simple. Any means that will assist us in forming a diagnosis quickly and with increased accuracy is always regarded with favor by the medical profession, and a knowledge of the manner in which this assistance can be secured should be as widely known as possible.

I have stated the claims of the centrifuge to be regarded as such an assistant. I trust you will agree with me that its use may oftentimes be of great value.

During the discussion on the paper instruments from three manufacturers, Messrs. Richards & Co. of New York, James G. Biddle of Philadelphia, and Bausch & Lomb of Rochester and New New York, were exhibited and their use demonstrated.—*The Brooklyn Medical Journal*, June, 1898.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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UREMIC AND OTHER ULCERS OF THE BOWEL.

Uremic, dysenteric, typhoid, tuberculous and follicular ulcers, and the ulcerations due to the administration of corrosive sublimate, phosphorus and other poisons are, pathologico anatomically, classified under the general head of diphtheritic ulcers. This purely anatomic classification in the nomenclature of which the etiologic factor remains unconsidered has, in some instances, been the cause of confusion on the part of physicians and medical students. That a tissue may be in a state of diphtheritic necrosis, leaving a diphtheritic ulcer after the necrotic tissue has separated from the healthy tissue, although the patient does not suffer from a diphtheritic infection or inoculation, or that an individual may have a croupous deposit upon any of his mucous membranes without suffering from croup in a clinical sense, would seem, at first sight, paradoxical. The same is true of the seemingly incompatible conditions where, for instance, a croupous membrane may form as the result of a general diphtheritic infection, or a diphtheritic necrosis, respectively ulcer, as a result of croup in a clinical sense. These seeming incongruities are at once converted into complete harmony after it is borne in mind that the pathologic anatomic nomenclature of these conditions is separate and distinct from the etiologic nomenclature. Thus the designation of diphtheritic ulcer was applied by Virchow, and this usage has become universal, to typhoid, dysenteric, follicular, tuberculosis ulcers, etc., and to the ulceration produced mechanically by pressure of hardened feces, or by certain poisons, such as corrosive sublimate and phosphorus, as well as to the ulcer resulting from diphtheritic infection. All ulcers of mucous membranes, then, which are the result of a superficial necrosis, were called by Virchow diphtheritic. While this term is very convenient, in an anatomic sense, it becomes misleading unless the etiologic classification receives simultaneous con-

sideration. That this is not always the case would appear from the discussions of medical societies whenever, for instance, croup and diphtheria form the objects of debate.

In the pathologic anatomic sense, then, the uremic ulcer is also classified under the general head of diphtheritic ulcerations. The leucomaines which are excreted in uremia by the intestinal mucous membrane are the poisons which seem to cause superficial necrosis, and upon separation of the necrotic tissue an ulcer remains which cannot be anatomically distinguished from any other diphtheritic ulcer, while etiologically and clinically it is a distinct and separate entity.

Of considerable interest is the method of production of dysenteric ulceration and the ulcer produced by corrosive sublimate poisoning. They are identical, pathologic anatomically as well as with reference to their location. In dysentery, as well as in sublimate poisoning, the ulceration extends along the transverse and longitudinal folds of the large bowel. Formerly it was generally supposed, and this presumption seems *a priori* a reasonable one, that the necrosis of the folds of mucous membrane was caused by the corrosive action of the bowel contents, until it was demonstrated by animal experiments conducted by Grawitz and Poelchen that when the severed small intestine is united to an abdominal wound in the form of a preternatural anus, and the distal end of the severed intestine, after being sutured, allowed to drop back into the abdominal cavity, the characteristic ulceration may be produced in the large bowel by the inunction of the skin with mercurial ointment, although no salt of mercury can enter the bowel with the saliva or the bile. From these experiments the conclusion was reached that upon the excretion of mercury from the blood was the combined action of the hyperemia of the bowel, muscular contraction, ecchymosis, and the bacteria present in the lumen of the bowel causes the necrosis in the folds of mucous membrane that protrude into the lumen of the large bowel.

The conditions producing uremic ulcers are much more complicated than those arising from corrosive sublimate inunctions. Uremic ulcers are principally located in the small intestines. Secondary necrosis occurring in tuberculous ulcerations of uremic individuals are in all probability due to disintegrated constituents of the urine. In such cases the ground of the ulcers is coated with a thick, green necrotic mass. Ulcers of this kind may, upon superficial examination, be mistaken for typhoid ulcers. Uremic ulcers are not confined to certain locations, but extend in all directions, and

may reach deeply into the submucosa. They are, according to Grawitz, probably produced by a corrosive fluid within the lumen of the bowel. Nothing distinguishes uremic ulcers from ulcers due to other agencies, and they can only be recognized by their combined characteristics. If, according to Grawitz, ulcers are found in the mucous membrane of the bowel in cases of more or less sudden suppression of the function of the kidneys, or where, upon the weakening of a considerably hypertrophied left ventricle, which played a large role in the compensation of a crippled secretion of urine by contracted kidneys, an abundance of urinary salts are excreted into the lumen of the bowel, such ulcers may be designated with a high degree of probability as uremic ulcers.—*Medical Review.*

THE X-RAY "BURN," ITS PRODUCTION AND PREVENTION. HAS THE X-RAY ANY THERAPEUTIC PROPERTIES?

Dr. Charles Lester Leonard, of Philadelphia, skiagrapher to the University Hospital and assistant instructor in clinical surgery, University of Pennsylvania, discusses this subject in the *New York Medical Journal*, July 2, 1898. From his study of cases he is of the opinion that the so-called therapeutic action and the X-ray burn are not due to some unknown quantity of this ray, but are due to the destructive action of the electric currents or static charge induced in the tissues of the patient. In a case of inoperable cancer, an eight-inch spark from a Queen self-regulating tube, held six inches from the surface, the surrounding tissues being protected by sheet lead and a grounded sheet of aluminum placed between the tube and the patient to convey the static charge to the ground. Exposures of 25 minutes daily for three weeks resulted in no X-ray burn nor therapeutic effects. The opposite was the result in a case of lupus vulgaris, with exposures of 20 minutes during 10 days; a burn with deep ulceration followed. He gives the following conclusions:

The X-ray "burn" is, therefore, not the result of the action of the X-ray, nor can it be produced by the X-ray; but the dermatitis produced is the result of the static currents or charges induced in the tissues by the high-potential induction field surrounding the X-ray tube.

The therapeutic properties attributed to the X-ray do not belong to it, but are due to the static charges and currents induced in the tissues, which have long been known to be capable of producing similar results.

The X-ray *per se* is incapable of injuring the tissues of

the patient, and the dermatitis, which has been called an X-ray "burn," is the result of an interference with the nutrition of the part by the induced static charges.

The patient may be absolutely protected from the harmful effects of this static charge by the interposition between the tube and the patient of a grounded sheet of conducting material that is readily penetrable by the X-ray—a thin sheet of aluminum, or gold leaf spread upon cardboard, making an effectual shield.

CHINOSOL.

F. Hobday, of the Royal Veterinary College, London (*Journ. Comp. Path. and Therap.*, March), discusses the therapeutic and toxicological effects of chinosol. Chinosol, which is a light yellowish powder, is stated to be a pure chemical compound belonging to the quinoline group, readily soluble in water, and having for its formula $C_9H_6NKSO_4$. Its properties are represented as antiseptic, disinfectant and deodorant. During the past nine months the drug has been extensively used in both the canine and the equine clinic. As regards its antiseptic properties, wounds of all kinds were treated with solutions of from 1 in 60 to 1 in 1200 with the the most satisfactory effect, the strength which was found to give the best results being from half a grain to a grain to the ounce. Upon fœtid ulcerating wounds a proportion of 1 in 480 speedily caused a healthy appearance and entire absence of pus, the application being made once or twice daily. In several cases the effects of solutions of this strength could be compared (in treating wounds in the same animal) with solutions of lysol and creolin, the chinosol giving decidedly the best result. In the form of powder, as a dry dressing, when mixed with boracic acid, zinc oxide, or starch, and compared with idioform used similarly, the sequelæ appeared about the same. When the pure powder was applied to wounds, the effect was to cause a good deal of pain, the animals showing signs of great irritation for two or three minutes, and the raw surface turning a blackish-brown color. As a disinfectant to the hands, skin and suture threads, it was employed in solutions of from 1 to 1,000 to 1 in 60 without any signs of irritation either to the hands of the operator or the skin of the patient. With instruments, however, care must be taken, and the solution used should be carefully measured. On several occasions when this precaution was neglected the instruments lost their edge, the steel parts became coated with greenish-black spots which were very troublesome to remove, and in those which had white bone handles the latter became discolored and rough to the touch. The

solution recommended for this purpose consists of 1 in 1,200. and, if the instruments are to remain in it for anything like an hour, this strength certainly should not be exceeded. As a deodoriser for the hands or for fœtid wounds, solutions of the same strength as those used for the disinfectant purposes acted satisfactorily. Details of several illustrative cases are given, and the author sums up the conclusions to which his experience has led him as follows:—(1) That chinosol acts well as an antiseptic, disinfectant, and deodorant when used in certain proportions. (2) That its action is better marked when used as a lotion than when used as a powder. 3. That the powder is not suitable for use on fresh wounds unless diluted in some way or other. (4) That for the disinfection of instruments care must be taken not to make the solution too concentrated. (5) That the drug possesses toxic properties. (6) That if used subcutaneously in too concentrated a form it will produce local irritation and swelling. The strength recommended for subcutaneous injection in human practice is from 1 in 600 to 1 in 200. (7) That the cat is very susceptible to its action, and that in this animal much more care is necessary to guard against toxic symptoms than in the case of the dog. In the cat, if subcutaneously injected, the extreme limit of dose should be one-sixteenth of a grain for each pound body weight, and in the dog one-eighth of a grain per lb. (8) That chinosol is not rapidly absorbed from the unbroken skin of the dog, and can be applied for several days in succession even in fairly concentrated solutions to the skin of this animal without producing eruptions or sores. (9) That the chief symptoms of poisoning are:—Sneezing and coughing, an increased flow of thick ropy saliva, subnormal temperature, staggering gait commencing with loss of motor power in the hind quarters, great prostration, and ultimately death from failure of the heart's action. (10) That the chief *post mortem* characteristic is the smell of chinosol on or in some part of the body; whilst another symptom to be looked for is the presence of frothy saliva in the pharynx, œsophagus or stomach.— *The British Medical Journal.*

MUSIC AS A SEDATIVE IN NEURALGIA.

Mr. Gladstone during the many weeks of acute neuralgia which ushered in the last phase of his fatal illness is said to have found great relief in music. Mr. Herbert Spencer is said to have had recourse to music for the relief of nervous disturbance; and the Empress of Austria is reported to have been cured of neuralgia by certain strains of sound repeated

at frequent intervals. Many other less illustrious sufferers have had their pain charmed away by the same sweet medicine. The "music cure" had considerable vogue some time ago in Germany, and a special hospital for its systematic application was, we believe, established in Munich. It is probable that music acts in such cases by diverting the attention, the pleasant impression overpowering and for the time obliterating the painful sensation. Attempts have, however, been made to show that music is something more than merely a sweet oblivious antidote. Nicolai, of Halle, a pupil of Hoffman, and a disciple of the intro-mathematical school, contended that the vibratory movements of the tympanum produced by musical sounds set up some kind of oscillatory movement in the nerves, and thus soothed the disturbed brain. Ferrari has quite recently suggested that the effect of music is to be explained by its acting on the organ of hearing in a manner analagous to massage, and so bringing the brain centres under the influence of "vibration treatment." An American physician, Dr. William F. Hutchinson, of Providence, Rhode Island, made a series of experiments as to the possibility of producing anæsthesia by very rapidly repeated blows, which may perhaps throw some light on the sedative effect of music. By arranging a number of small hammers with elastic handles on a revolving wheel, he was able to make a rapid percussion, each stroke representing a weight of 10 grains, and being repeated four hundred times a minute. This number of strokes did not materially lessen the sensibility of the part to which they were applied. Dr. Hutchinson afterwards succeeded in getting constructed an induction apparatus consisting of very carefully measured coils, and having a rheotome, made of metallic ribbon, which could be made to vibrate very rapidly. By means of very accurately made tuning forks he measured the number of vibrations which this "singing rheotome" made in a minute, and found that when it sounded the note of C major, representing 540 vibrations per second anæsthesia was produced, but, if the interruptions were made still more rapid, this effect was lost. The change in the number of vibrations was produced by altering the tension on the rheotome, and this tension was so great, 740 pounds to each centimetre in length, when tuned to C major, that steel was not strong enough, and it became necessary to make the metallic ribbon of phosphor-bronze. Three Burnley cells were used to run the apparatus. By experiments on himself and others, Dr. Hutchinson had found that with the number of vibrations corresponding to A major, 540, one minute was sufficient to produce numbness; on stopping the current there was a

rapid return of sensation. An attempt was then made to produce local anæsthesia on a patient suffering from a whitlow on the finger. The finger was placed in a metallic tube partially filled with sponges moistened with salt water. Starting with A major and running up to G major during a period of three minutes, it was found that the sensibility had been scarcely diminished; but when the rheotome had tuned to C major sufficient anæsthesia was produced in three minutes to allow of an incision being made in the whitlow without the patient suffering any pain whatever. In a case of *tic douloureux*, in which galvanism and franklinism had both been tried and had proved useless, the induced current from this machine was tried, the rheotome being adjusted to C major, and the negative electrode being applied to the nape of the neck and the other to the forehead. In five minutes the pain had sensibly diminished, and in ten minutes it had been completely relieved, and the patient was able to enjoy the first sleep for two days. In Dr. Hutchinson's experience every kind of pain yielded equally well to the currents produced when the rheotome was adjusted to C major. It would appear, therefore, that the note C major produces vibrations which neutralise the disordered vibrations in the affected nerve. It might, perhaps, be worth while to try the effect of airs in which C major predominates in cases of neuralgia. It would, however, be prudent for the experimenter first to assure himself that the patient is not one that hath not music in himself nor is not moved with concourse of sweet sounds; otherwise he might find himself made the subject of experiments in rapid percussions and vibrations tuned to D major, which would have an effect the reverse of anæsthetic.—*The British Medical Journal.*

CHOREA: ITS SYMPTOMATOLOGY, ETIOLOGY AND TREATMENT.

Each year, with a constancy which is equalled only by time itself, there is, during the spring months, an up-cropping of chorea which at times suggests almost a state of epidemic prevalence. Collateral to this fact and in proof of its truth, there is each year at about the same time an unusually abundant literature upon this subject, which literature seems, by the way, to be limited to no clime or country. Among an exceedingly large number of papers upon chorea which have recently come within our editorial notice, three which are especially worthy of comment and review are contributions by Weir Mitchell and Rhein and by Leonard Guthrie (Treatment, March 10, 1898, Abstract by Blackader,

Montreal Medical Journal, April, 1898) and a paper by Sajous (*Monthly Cyclopædia of Practical Medicine*, April, 1898.)

Symptomatology.—Dr. Mitchell, in collaboration with Rhein, has been making a study of the motor manifestations of chorea with the result that they find that the disease is divisible, as regards this symptom, into five clinical groups, as follows:

1. Cases in which during voluntary muscular inaction, choreiform movements are almost continuous, but in which these movements disappear entirely when muscular acts are performed. This appears to be a phenomenon quite beyond the influence of the will, and suggests that inhibition for the time is increased.

2. Cases in which choreiform movements are continuous during rest, but become greatly increased with intentional effort. It is impossible for one suffering from this variety of the malady to complete satisfactorily any voluntary muscular act.

3. Cases in which choreic manifestations only become evident on attempts to perform a muscular act. The hands at rest move, if at all, only slightly, and at rare intervals, but on attempting to use them, the twitchings become sufficiently active to prevent, or greatly to interfere with, the performance of the act. These cases are comparatively rare. So also are the next class.

4. Cases in which the movements, continuous during rest, are but slightly altered by the tests employed.

5. There are also cases which present during their course at different times more than one of the types described.

Guthrie advocates a much less elaborate division into two types or classes.

1. Sthenic, or explosive, in which the predominating character of the symptoms is violence, and wide range of movements.

2. Asthenic, or pseudo-paralytic, in which the movements are feeble in character, and the patient appears to have some loss of muscular power, or of will power, to execute voluntary movements. These two main groups may be further subdivided into severe and mild forms.

The sthenic type may, and often does, pass into the asthenic. The symptom picture differs widely in these two forms as described by Guthrie, as do also both prognosis and treatment.

Two of the sub-varieties of the sthenic form, says

Guthrie, "require some consideration. (*a*) Cases which, after being confined to bed for some weeks, cease to improve. Sometimes the movements continue whilst the patient is at rest, and cease when voluntary action is attempted (Weir Mitchell, Group I.) This is an indication for encouraging voluntary movements, by getting the patients out of bed and allowing them to go about. They then often speedily improve. (*b*) Sometimes the movements occur only when the child is being watched whilst at rest, and when it attempts actions requiring manual dexterity, under supervision. These children are usually timid, self-conscious little creatures. They gain confidence if patiently encouraged to use their muscles, and soon lose their ataxy. Simple drill exercises can easily be invented to meet the case. Drill exercises are also of use when the ataxy only occurs on voluntary movements, whether the child is being watched or not."

Monroe, quoted by Sajous, has also been studying with especial interest the motor symptoms in chorea. He believes motor weakness of a pseudo-paralytic character to be much more common than is generally believed. "Sometimes," he states, "it is practically the only symptom, and the diagnosis then is somewhat difficult." Sheffield (*Ibid*) notes among the rare motor phenomena of chorea the occurrence of rapid alternations of contraction and dilatation of the pupils in a choreic girl, the ciliary muscles acting several times per minute in this way.

Etiology.—As regards the etiology there is evidence in the literature of a progressive tendency towards the acceptance of the theory of some toxic or infectious agency as a cause. Among those advocating this view are Legay, who believes the exciting cause to be always some recent infection, Napier, Mei and Bishop. Rheumatism is considered the most constant and important etiological factor, by London, Marfan, Simon, Churton, Guck, Meyer and Kraft Ebbing. Sanson, on the other hand, denies the relationship, while Kraft Ebbing thinks it is more important as a factor in England than on the Continent, and he does not believe that the endocarditis *per se* is ever a cause, though it may be an accompaniment.

Quite a remarkable unanimity appears to exist with regard to the causative relationship of scarlet fever to chorea. Napier, Marfan, Cornell and Priestly all cite abundant clinical evidence in support of this belief. Priestly goes so far as to question whether chorea should not be considered a sequel of scarlet fever. In an analytical study of 125 cases of chorea published by the writer (*Medical News*,

August, 1897), twenty cases were attributable to this cause, to which fact especial attention was called at the time.

Both Mosler and Massalongo, also quoted by Sajous, cite examples of what they describe as "alcoholic" chorea. Dakin found in seven cases of chorea occurring in pregnancy a mitral murmur invariably present. Burr and London find from laboratory studies that very important blood changes are to be noted in all cases of chorea. The anæmia is of the chlorotic type according to Burr. The hæmatology of chorea is believed by London to be of the greatest value in treatment and prognosis.

Treatment.—Kraft Ebbing says that arsenic is second to no other remedy in its value in chorea. In this opinion he is sustained by Sinkler, Spiller, Marfan, Renai and Lewis. The necessity for large and ascending doses is advocated without exception. Renai indeed is quoted as recommending that the drug be commenced in doses of 20 drops of Fowler's solution in children and double that amount for adults. While the writer believes in the use of arsenic carried up to the extreme tolerance in chorea, such a dosage as 20 drops to begin with seems dangerously unsafe and unnecessary. Rest in the early stages with nutritious diet and later light exercise in the open air are measures of treatment upon which a general agreement seems apparent. Kraft Ebbing condemns without qualification the use of electricity, while Renai, McKenzie (*Canadian Journal of Medicine and Surgery*, March, 1898), Graucher and Guthrie especially emphasize the value of gymnastics. Averend employs belladonnæ with great confidence and in enormous doses. Thirty drops of the tincture every four hours for ten days to a child is perfectly justifiable he says, provided certain precautions as to the kidneys are observed. Guthrie and Graucher are among a large number who have found antipyrine of value. Of the newer remedies the evidences as to positive value are so inclusive as scarcely to justify reference to them at all.—*The New York Polyclinic.*

CERVANTES AS PATIENT AND AS PHYSICIAN.

It is related that Sydenham, being asked by Blackmore (afterwards pilloried in the *Dunciad* for his epics "writ to the rumbling of his chariot wheels") what works he should read to improve his medical knowledge, answered "Read *Don Quixote.* It is a good book. I read it still." It is probable that our English Hippocrates merely wished to snub a pert youth; but, rightly understood, the advice might with ad-

vantage be followed by physicians more largely than it is, especially in these days, when the absorbing pursuit of the microbe tends to make us forget that there is also a macrobe which deserves attention. The physician has to deal with man as a whole, and the human body, whether it be regarded as a piece of "foolish compounded clay" or as "the Lord's anointed temple," is something more than a happy hunting ground for bacilli. The great creative works of literature in which human life is depicted by men who, in the words of Matthew Arnold, have seen it steadily and seen it whole, and in which the workings of the complicated machinery of man's nature are made visible, can, if rightly studied, give the physician a knowledge which he will find most useful in his practice, and which cannot be got from medical books or learnt in the laboratory or the dead-house. For those who appreciate the value of such knowledge, *Don Quixote* is indeed "a good book." It is a proof of the broad-minded view which the University of Paris takes of the art of healing that the other day it accepted a thesis, entitled "Cervantes, Patient and Physician," from a candidate for the degree of Doctor of Medicine. The author, M. J. Villechauvaix, has not, we are bound to say, made the most of his subject, but his essay is interesting as far as it goes, and he appends a bibliography likely to be useful to anyone who may wish to make a deeper study of the creator of Don Quixote in his medical aspects. Cervantes was born on October 9, 1547, and died after a life full of suffering, ill-health and evil fortune of all kinds on April 23, 1616. He contracted malaria during a visit to Rome early in life, and on the very morning of the famous battle of Lepanto (September 7, 1571), he was so ill with ague that the captain of the ship on which he served tried to induce him to remain below. He insisted on fighting, however, and received three arquebuss wounds, two in the chest and one on the left hand, which was permanently disabled. He was six months in hospital at Messina, and his wounds were yet incompletely healed when four years later he was made prisoner by Algerian Corsairs on the high seas on September 26, 1575. For five years he was held captive by the Moors, suffering much ill-usage at their hands, but at last forcing them, out of fear of the influence which his indomitable spirit gave him among his fellow-prisoners, to set him free. He died of dropsy, which M. Villechauvaix surmises to have been of cardiac origin, but there is really no evidence on the point. There is a tradition that Cervantes studied medicine, and there are in his works many passages which show that he had a considerable acquaintance with the art of healing as it

was understood in his day. During his Algerian captivity he ministered to the needs of his fellow-prisoners in sickness with a skill which bespeaks, if not special training, a considerable experience in dealing with disease. How close and accurate an observer he was is shown by the wonderful picture of delusional insanity which he gives in *Don Quixote*. M. Villechauvaix points out that he anticipated Pinel in the rational treatment of insanity. The books of chivalry which had disordered the brain of the Knight of the Sorrowful Countenance are destroyed, and every effort is made to create a new mental environment for him, his very delusions being skillfully taken advantage of to this end. It is somewhat strange that M. Villechauvaix should have made no reference to Sancho Panza's famous physician, who in his strict views as to diet may perhaps be looked upon as the scientific forerunner of Sir Andrew Clark. He quotes, however, an epophthegm that the "stomach is the laboratory in which health is manufactured," which shows that Cervantes had very sound views as to the important relations of the digestive to other functions of the body.—*The British Medical Journal.*

ONE HUNDRED CASES OF PULMONARY TUBERCULOSIS TREATED WITH LARGE DOSES OF BEECHWOOD CREOSOTE.

Dr. Charles Lamplough, Resident Medical Office, City of London Hospital for diseases of the chest, discusses the subject in the *British Medical Journal*, May 28, 1898.

The drug was given by inhalation and internally, beginning with small doses, and increasing until 40 to 60 minims were taken three times daily after meals, and in some cases larger doses, and he thinks that even larger doses could be given. In sixty-eight cases the symptoms either partially or entirely disappeared, the patients increased in weight and the temperature fell. Average stay in hospital was two months. The physical signs improved in these cases, but not in proportion to the symptoms. Albumen disappeared from the urine in cases where it was present, and it does not induce this condition. But little discomfort comes from swallowing these doses, and anorexia, nausea and sickness are rarely complained of. If it occurs on account of the oil, a spirituous solution may be substituted, or the emulsion may be given in milk, sucking a lemon after or taking beef tea or fruit juice. Creosote tends to act as a laxative, and does not tend to produce hæmoptisis but rather acts as a hæmostatic in phthisis. Creosote is excreted by the kidneys as guaiacol and cresol

combined partly with sulphuric and partly with glycuronic acid; it is decomposed chiefly in the stomach.

Having compared the objections raised against the administration of beechwood creosote in phthisis with the results obtained at this hospital by treating 100 cases with this drug, he suggests that the following points are worthy of consideration and further investigation.

1. The best beechwood creosote can be given with benefit, in amounts varying from 120 to 240 minims daily, in cases of pulmonary tuberculosis.

2. The drug is best administered in cod liver oil or in a spirituous solution, and in some cases the "creosote chamber" or oro-nasal inhaler may be ordered in addition with advantage.

3. The dose should be small at first, but it can be rapidly increased to 40 minims three times daily for an adult. In 3 cases doses of 30 minims three times a day were well borne by children.

4. Large doses rarely cause any gastric disturbance; on the contrary, the appetite is frequently increased, symptoms of dyspepsia disappear, and cod liver oil is more easily assimilated. The cough, expectoration and night sweats are diminished, and the physical signs improved.

5. Owing to its disinfectant action in the alimentary canal the drug probably diminishes the risk of tuberculous enteritis by auto-infection when patients swallow their sputa, but owing to the increased peristalsis, which is created by creosote, it is usually contra-indicated in cases where the ulceration is already advanced.

6. The drug does not tend to cause hæmoptysis, but rather to prevent its recurrence.

7. Creosote does not irritate the normal mucous membrane of the genito-urinary tract.

8. Owing to its extremely small cost pure creosote can be given to a much larger number of patients than the carbonates of creosote and guaiacol, which respectively cost four times and twelve times as much as the older drug.

DANGER OF CHLOROFORM INHALATION IN THE PRESENCE OF ILLUMINATING GAS.

There has been during the past few years various references to the changes which take place in chloroform when its vapour becomes burned in a room lighted by ordinary illuminating gas. The carbonyl chloride, which under these circumstances becomes developed together with hydrochloric acid, produces dyspnœa, cough, and a feeling of suffo-

cation alike in operator and patient. In damp weather, or when fog is present, these discomforts are accentuated, and it is just at such times that more thorough ventilation becomes most difficult. However, temporary inconvenience appears not to be the only risk run in these cases. Dr. Mey, of Berne, has reported a death as resulting from the generation of these fumes. Dr. Mey found himself compelled to undertake a serious operation involving abdominal section, which occupied several hours. It had to be undertaken at night, and, besides the operator and patient, a colleague of the surgeon and two nurses were present in the room. Chloroform was administered, and coming in contact with the illuminating gas caused severe cough. Some hours after the operation Dr. Mey suffered from severe dyspnœa, which persisted for some time. The two nurses had similar seizures, and one of them eventually died from the effects upon her lungs. So serious a result is, we believe, a unique experience, and one which is likely to deter surgeons from an unguarded employment of chloroform when an open flame is the only means of illumination. The dangers referred to are minimised when the chloroform is given from an inhaler, such as Snow's, Clover's or Junker's. With such an apparatus comparatively little chloroform vapour escapes into the air, and, therefore, little, if any, is burnt. A further precaution is a thorough ventilation; a large room with an open fireplace and an efficient ingress for air will do much to obviate such untoward accidents. In hospitals there should be no possibility of either impure chloroform or of such crude arrangements being in use as unguarded gas lamps and chloroform given from a cloth or towel. With the simple means of testing and purifying chloroform, which Professor Ramsay has given, no excuse can reasonably be made for jeopardising the lives alike of the patients and of the officiating staff by using decomposed chloroform. It is to be hoped that to be forewarned will prove to be forearmed, and the occurrence of the death of the nursing sister at Berne will prevent the possibility of another fatality from a cause which seems distinctly preventable.—*The British Medical Journal.*

THE

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Editorial.

COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

The Semi-Annual Convention, which was held at the Laval University rooms, was an unusually quiet and uneventful meeting, and but little was accomplished outside of the regular routine work in connection with the conferring of licenses and the examination of candidates who had not the full qualifications necessary to exempt them from examination. A number of important notices of motion were to have come up for consideration, but the governors wisely decided not to discuss them at this meeting, as it was so near the time for the election of a new board. Hence, the attacks on the B.A. degree, the method of enforcing the Lodge Doctor, resolutions of the previous session and other subjects were left to be considered by the new board.

In striking contrast to the tameness of this meeting was the triennial meeting for the election of a new board. The Reform Committee in Montreal and Quebec had been instituting an active campaign with a view of breaking up the monopoly which had the reins for three terms in succession and had succeeded in rousing the members of the College throughout the province to a sense of their duty in regard to the method of electing the governors, the election by district

being the goal aimed at. The result was the largest meeting ever held by the College, and will be a red-letter day in its annals. Between four and five hundred members were present at the meeting, and nearly a thousand votes either directly at the meeting or by proxy, were polled. Seldom is it one's experience to witness such excitement and uproar as was exhibited by many of the more impulsive members present. The first clash came when a motion was made to change the order of proceedings, and after the President's annual report was read and that of the other officers, to proceed with the election of a new board.

When the vote was taken it was seen that the doom of the ruling *régime* was settled, as their supporters were in a hopeless minority. Although the presiding officer overruled the motion, his decision was appealed from, and he was not sustained. It was then that numerous theatrical scenes were enacted not soon to be forgotten, and one was carried back to student days. Certain speakers were drowned in the noise that greeted their attempts to make themselves heard. Half a dozen speakers at a time would endeavor to get the eye of the chairman, some doggedly remained on their feet, defying the crowd until they were permitted to speak. The following extracts from the press reports give a fair idea of the proceedings:

"Dr. Lanctot objected to matters being rushed with inordinate haste, and insisted that, in view of covert reflections and slanders upon the board, an opportunity should be given to offer a defence before attempting to reach a snap verdict. He had every confidence in the ability of each member of the board to repudiate and nail every slander and falsehood.

"Dr. Lachapelle denied the right of any member to precipitate a discussion before a vote had been taken. He wanted the rules suspended in order that visiting members could vote in time to return home that night.

"After some minutes' wrangling, Dr. Lachapelle's motion was adopted, after which Drs. J. A. Beaudry, Elder, Benoit, Johnston, Faucher, Perrigo and N. J. D. Gauthier were appointed scrutineers for the election of governors, and the meeting adjourned until the afternoon.

"It was after three o'clock when the scrutineers handed in their report, and the bear garden scene of the morning was at once resumed. Dr. Grandbois attempted to make a motion to the effect that the proceedings had been irregular and contrary to the by-laws of the college, and that the election be declared null and void. But he had barely read the first half dozen words when there were shouts of opposition from every quarter of the room, with intimations for him to be seated. He declined, however, to accept the advice, and Dr. George Villeneuve took a hand and tried to pacify him, but he only declared the more vehemently that he would be heard, and gesticulated the more vigorously. At last he quieted down so far as to allow the results of the election to be declared.

"The reform ticket swept everything, and those elected governors were: Dr. C. Marshall, Beauharnois; Dr. C. L. Cotton, Bedford; Dr. E. N. Chevalier, Iberville; Dr. M. S. Boulet, Joliette; Dr. T. Cypihot, Montreal; Dr. E.L. Quirk, Ottawa; Dr. E. H. Provost, Richelieu; Dr. E. Turcot, St. Hyacinthe; Hon. Dr. D. Marcil, Terrebonne; Dr. J. E. Baril, Dr. L. J. V. Cleroux, Dr. J. I. Desroches, Dr. S. Girard, Dr. A. R. Marsolais, Dr. J. A. MacDonald, Montreal; Dr. T. Fortier, Beauce; Hon. Dr. R. Fiset, Gaspe and Rimouski; Dr. P. E. Grandbois, Kamouraska; Dr. S. Bolduc, Montmagny; Dr. Jules Constantin, Chicoutimi and Saguenay; Dr. J. A. I adriere, Dr. M. Brophy, Dr. J. P. Boulet, Dr. F. X. Dorion, Dr. C. Gingras, Dr. A. Jobin, Dr. C. C. Sewell, Dr. A. Vallee, Quebec; Dr. L. J. O. Sirois, Arthabaska; Dr. L. P. Normand, Dr. E. F. Penneton, Three Rivers; Dr. P. Pelletier, Dr. A. N. Worthington, Dr. T. L. Brown, St. Francis district.

"The result of the election was received with considerable applause, and immediately it was heard Dr. Grandbois again attempted to make his motion, but only to be shouted down as before.

"Dr. Lachapelle moved, seconded by Dr. Armstrong, that the report of the scrutineers be adopted; that the order of the day be taken up, and that as soon as that meeting adjourned the newly elected governors proceed with the election of their officers to the medical board."

Dr. Grandbois again started a scene by attempting to speak; he finally handed in an amendment, which was defeated, and the motion of the scrutineers was adopted. Most of the new board were elected by about nine hundred votes each. The reform committee had, with the aid of the proxy, voted out the Beausoleil combination by using the proxies in hand for each of the chosen candidates, the former's strength in the direction numbered about forty.

After the election the board went into private session and elected the following officials:—

President—Dr. Lachapelle.

First Vice-President—Dr. Craik, dean of McGill.

Second Vice-President—Dr. Catellier, Quebec.

Secretary for Montreal—Dr. John A. Macdonald.

Secretary for Quebec—Dr. G. P. Boulet.

Treasurer—Dr. Jobin, Quebec.

Registrar—Dr. A. R. Marsolais, Montreal.

It was announced that the representatives of the Universities were: for McGill, Drs. Craik and Roddick; for Laval, Montreal, Drs. Lachapelle and Demers; Laval, Quebec, Drs. Simard and Catellier; Bishop's College, Drs. F. W. Campbell and J. B. McConnell. Dr. Marsolais was requested to inquire into a report concerning the books forming the newly established library. The meeting then adjourned to meet in Quebec in September.

The Berlin correspondent of the *British Medical Journal* states that:

At the last meeting of the Berlin Society of Public Hygiene Herr Geheimrath Seinola reported on the progress made in the project of a new (fourth) municipal hospital for Berlin. The total expenses have been calculated at above 13 million marks (£650,000); the hospital is to be finished by 1903. It will occupy no less than 105 acres of land and is to consist of 62 buildings in all. There will be 26 one-storey pavilions of 46 beds each; the lying-in department and the isolation department are to be built more than one storey high. All arrangements for hydropathic treatment, baths of all sorts, and "medico-mechanical" treatment will be provided. Inmates of the lying-in department will be

allowed to remain till the twentieth day after delivery—a great improvement on the practice at the Charité, where they are dismissed after the ninth day. The medical staff is, to consist of a directing physician, two chief physicians directors of departments, besides an assistant physician for every fifty beds. The drugs, etc., will be under the care of three chemists. A training school for nurses is to be affiliated to the hospital.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

EIGHTH ANNUAL MEETING AT BUFFALO, N.Y., LIBRARY BUILDING, LAFAYETTE SQUARE, SEPTEMBER 13TH, 14TH AND 15TH, 1898.

PRELIMINARY PROGRAM.

A series of ten minute discussions on electrotherapy, of special interest to the general practitioner, including Effect of Electricity on Tissue Metabolism, Electro-diagnosis, Diseases of the Nervous System, Diseases of Women, Genito-urinary Diseases, Malignant Growths, Orthopædic Uses, Diseases of the Eye, etc.

The following papers have been promised, Dr. Apostoli, Paris, France, Note on New Applications of the Sinusoidal Current in Electro Therapeutics; Dr. Gauthier Paris (1) The Hydro-electric Bath with Sinusoidal Current in Disease, (2) On the value of the Hot Air and Light Bath in Disease, (3) Two years of Practice in Radiotherapy, (4) Electropy in Gynæcological Applications; Dr. Felice La Torre, Rome, Italy, Electricity in the Cure of Uterine Fibromyomata; Dr. J. Inglis Parsons, London, Eng., The Effect of High Tension Discharges upon Micro-organism; Mr. Nikola Tesle, New York, High Frequency Oscillator for Electro-therapeutic Purposes; Dr. Wm. C. Krauss, Buffalo, Case of Lightning Stroke without Serious Consequences; Dr. Lucien Howe, Buffalo, the Method for using Cataphoresis in Certain Forms of Conjunctival Inflammations; Dr. John O. Roe, Rochester, N. Y., The uses of Electricity in Diseases of the Nose and Throat; Mr. J. J. Carty, E. E., New York Cataphoresis; Dr. J. H. Kellogg, Battle Creek, Mich., the Electric Light Bath; Dr. M. A. Cleaves, New York, Metallic Electrolysis, with Laboratory Experiments, (2) Electrical Treatment of Inflammatory Exudates; Cathaphoresis and Metallic Electrolysis, by Wm. J. Morton New York; Dr. W. J. Herdman,

Ann Arbor Mich., Electricity in Gynæcology; Dr. A. D. Rockwell, New York, Diagnostic and Therapeutic Relation of Electricity to Diseases of the Central Nervous System; Dr. Grover W. Wende, Buffalo, Electricity in Acne Vulgaris and Acne Rosaceæ; Dr. Caleb Brown, Sac City, Iowa, Cataphoric Action of the Galvanic Current; Mr. R. G. Brown, E. E. Brooklyn, (1) New Electric Light for Diagnostic Purposes, (2) Surface Electrodes, How they Should be Made, Connector Cords, How They Should be made and Insulated; Dr. Robert Newman, New York, Electricity in Deafness and Strictures of the Eustachian Tube; Dr. R. J. Nunn, Savannah, Ga., Treatment of Uterine Fibroids by Small Currents Administered Percutaneously; Dr. Wm. F. Robinson, Albany, N.Y. Treatment of Certain Muscular Affections by Means of Electricity; Dr. G. W. Overall, Memphis, Tenn., True Status of Electricity and Allied Remedies in Treatment of Strictures and Prostatitis; Dr. W. S. Watson, Fishkill-on-Hudson, N. Y., Electricity and Medical Institutions; Dr. W. H. White, Boston, Mass., Static Electricity in Nervous Diseases; Dr. H. S. Jewitt, Dayton, Ohio, The Misuse or Abuse of Electricity as a Therapeutic Agent; Dr. W. Scheppegrell, New Orleans, La., Electricity in Diagnosis of Disease of the Ear; X-Ray Burns, by Dr. W. H. Harris, Toronto, Ont.

An Illustrated Lecture on X-Ray will be delivered by Dr. Wm. J. Morton, New York.

An exhibition of electrical apparatus for diagnostic, therapeutic and radiographic purposes will be held in the same building.

A cordial invitation is extended to members of the profession.

CHARLES R. DICKSON, M. D., *President.*

JOHN GERIN, M. D., *Secretary.*

AUBURN, N. Y., July 26, 1898.

DEAR DOCTOR:

The Eighth Annual Meeting of the American Electro-Therapeutic Association will be held on Tuesday, Wednesday and Thursday, September 13th, 14th and 15th, 1898, at Buffalo, N. Y.

The Society of Natural Sciences has kindly placed at our disposal its rooms in the Public Library, Lafayette Square; a program of exceptional interest is assured; there will be an exhibition of electric apparatus for diagnostic,

therapeutic and radiographic work; a hand-book of information will shortly be issued by the Committee on Arrangements; Hotel Iroquois will be the headquarters, rates $4.00 to $5.00 per day, American plan; $1.50 to $3.00, European plan.

Among the many entertainments provided, there will be Tally-ho coach drives about the city daily, a public reception on Tuesday night, excursion down Niagara River and reception at Island Club, Grand Island, and other receptions, visits to industries of interest. Extra efforts are being put forth to make this in every way the best meeting that has been held, therefore you are particularly requested to attend. Kindly inform the secretary at as early a date as possible whether you will be present, if you will be accompanied by members of your family and the title of the paper you will read, also the names of persons whom you desire to propose for membership.

An excursion for members, exhibitors and friends from New York to Niagara Falls and return with stop-over privileges at Buffalo will leave the Hoboken Depot of the Delaware, Lakawanna and Western Railway on Monday morning, September 12, reaching Buffalo about 7 p.m.; a palace car will be attached. Tickets for the excursion, good for thirty days, to return on any regular train of D. L & W. R.R., $10.00; seat in place car, $1.50 extra. Tickets and seats can be secured from Dr. Robert Newman, from whom all particulars may be obtained. Early application should be made, for, if a sufficient number can be secured, a special train will be run. Special hotel rates at Niagara Falls will be secured for all excursionists.

COMMITTEE ON ARRANGEMENTS AT BUFFALO.

ERNEST WENDE, M. D., 471 Delaware Ave., Chairman.
WILLIAM W. POTTER, M. D., 284 Franklin St., Printing.
NEWCOMB CARLTON, E. E., 109 White Building, Exhibits.
ROSWELL PARK, M. D.
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H. R. HOPKINS, M. D.
CHARLES R. HUNTLEY, E. E.

COMMITTEE ON EXCURSION.

ROBERT NEWMAN, M. D., 64 West 36th St., New York.

Very truly yours,

CHARLES DICKSON, M. D., *President.*

JOHN GERIN, M. D., *Secretary.*

68 North street, Auburn, N. Y.

Book Reviews.

Sajous' Annual and Analytical Cyclopædia of Practical Medicine. By Chas. E. de M. Sajous, M.D., and one hundred associate editors, assisted by corresponding editors, collaborators and correspondents. Illustrated with chromo lithographs, engravings and maps. Cloth $5.00, half Russia $6.00. The F. A. Davis Company, Publishers, Philadelphia. Volume I. Abdominal injuries to Brights' disease.

We have already given a notice of what was to be the character of this New Annual. The first volume has been issued for some weeks now; five others are to follow. The subjects are alphabetically arranged, and the whole range of Medicine and Surgery is to be included. Large type is used for the general descriptions of the subject which are similar to the articles in any system of Medicine; inserted in smaller type throughout the article are excerpts from the recent literature of the subject, illustrating and confirming the texts. The partial list of associate editors given in the first volume includes the names of some of the leading physicians of the United States, and augurs well for the character of the work which is offered in the present volume, and may be expected in the succeeding ones. As to how the subjects are treated, antipyrine may be taken as an example; in the large text a full description is given, its incompatibilities, dose, idiosyncracy, contraindications, physiological action, antipyrine poisoning and its deleterious effects on the blood and organs, local use, hypodermic use, therapeutics, interspersed in smaller type are seventy-six condensed notes from various sources representing all the additional information gained during 1896 and 1897 and other excerpts bearing date as far back as 1888. The entire subject is thus very fully covered. Other articles have twice this number of excerpts. A monthly journal is also issued and sent free to the subscribers of the work for three years, containing a *résumé* of the monthly progress in the various branches of Medicine. This vast undertaking speaks volumes for the enterprise and courage of Dr. Sajous, his assistants and the publishers, and we hope the profession will give them the support they deserve.

A very useful feature is the numerous formulae and methods of treatment which are included. The details in this respect in the article on alopecia might well be worth to a physician with a a case to care for more than the value of the volume. We hope the remaining volumes will appear early, so that the final ones may not be out of harmony with the first, as would be the case if three years is to elapse before the series is completed. The book is well printed, has a number of cuts and colored plates. It is neatly bound in grey and black linen. It will be an invaluable work for the writer, teacher and practicing physicians.

The Diseases of the Stomach. By William M. Van Valzak, A.M., M.D., Professor of General Medicine and diseases of the digestive system in the New York Polyclinic Medical School and Hospital, and J. Douglas Nisbet, A.B., M.D., Adjunct-Professor of General Medicine and diseases of the digestive system in the New York Polyclinic Medical School and Hospital. Illustrated. Price $3.50. W. B. Saunders, 925 Walnut st., Philadelphia, 1898. Canadian agents, J. A. Carveth & Co., Toronto Ont.

In this volume of six hundred and fifty pages we have a distinct addition of great merit to medical literature. An examination gives the impression at once of a *sui generis* production and the evidence of emanating from men possessing originality in a high degree and a true appreciation of what are the needs of the general practitioner and student. The classification is somewhat different to that adopted by most authors—it is more simple, and avoids describing as distinct diseases what are only the functional signs of disease.

There are six sections in the book; three are devoted to general subjects and three to special. Section two, on diagnosis and diagnostic methods, is one worthy of careful study, as the power to make a proper examination and a correct diagnosis must necessarily precede a properly directed and successful form of treatment. The authors warn against too much dependence on the results of the pathological chemistry of digestion to the ignoring of what can be learned by the older methods of investigation. Diagnosis thus explained is a logical method, proceeding by analysis, synthesis, comparison, and is a methodical procedure. They are considered here under the headings of clinical history, the physical signs, the functional signs, the bacteriological signs and the anatomical signs. Each of these subjects are considered in minute detail, and all the modern apparatus used in diagnosis, many of which are shown in cuts such as Ewald's Einhorn stomach lamp. Kuhn's pyloric sound, Strauss' apparatus for lavage and inflation, Boas' aspirator, etc. The qualitative and quantitative tests for the various secretions of the stomach are described with clearness.

The chapters on diet and general treatment are full and explicit. Two-thirds of the book is devoted to the consideration in details of the various special diseases of the stomach, beginning with the sensory dynamic affections, butimia, acarin, parorexia, anorexia, nervosa, gastralgia nervosa, hyperaesthesia, gastrica; then the dynamic affections of secretions: adenohypersthenia gastrica, hyperchylia gastrica. Adenasthenia gastrica, then the motor dynamic affections and myasthenia gastrica, then gastritis ulcer of the stomach and neoplasms and displacements. Section six is entitled the Vicious Circles of the Stomach, referring to the effects of derangement of the stomach on other organs and systems, and finally the affections which induce secondary diseases in the stomach. The physician who needs a modern guide in the affections of the stomach written in a clear style, thoroughly practical and fully representing the present status of our knowledge in this important and common class of ailments cannot do better than secure a copy of this excellent work.

Therapeutics of Infancy and Childhood. By A. Jacobi, M.D., Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons, New York. Second Edition. J. B. Lippincott Company, Philadelphia, Pa.; Canadian Agent, Charles Roberts, 593 Cadieux st., Montreal.

The first edition of this interesting and useful book was issued in 1896, and, as would be expected from the eminent abilities of the writer as a teacher and writer on pædiatrics, it was warmly received and accorded the fullest praise by the profession and medical reviewers of the United States, Canada and in Europe. The present edition has new chapters and others entirely rewritten, and much additional matter and changes characterize the remaining portions of the work. The volume of over 600 pages represents the results of the author's personal observations, and reflects largely the present state of our knowledge of pædiatrics as expressed by its leading exponents on both sides of the Atlantic. The articles are eminently practical, condensed and pointed, and refer almost entirely to the prophylactic and therapeutic aspect of the subjects treated. Dr. Jacobi is undoubtedly a very conservative investigator. He was one of the latest authorities to regard diphtheria as a local disease rather than a general affection with local manifestations, and, in the discussion of the treatment of the disease in the present volume, the author depends largely on the old forms of treatment, Mercury and Iron, and speaks of the antitoxin treatment as if he had not had any experience of it himself, but grudgingly has to admit the effectiveness of the treatment from the results of other authorities. Dr. Jacobi questions the existence of the disease Rötheln. In his reference to disinfectants, in view of the vast resources available now, the meagre directions here seem insufficient; formalin is not mentioned. While the experience of others is largely drawn from Dr. Jacobi's book is a presentation chiefly of what he observes and does himself rather than what occurs beyond his own horizon. It is replete, however, with practical suggestions, and will prove a useful addition to one's stock of pædiatric literature.

A Manual of Legal Medicine for the use of Practitioners and Students of Medicine and Law. By Justin Herold, A.M., M.D., formerly coroner's physician of New York City and County, late house physician and surgeon of St. Vincent's Hospital, New York City, etc. J. B. Lippincott Co., Philadelphia, Pa. Charles Roberts, 593a Cadieux st., Montreal agent.

The subject of this work is not one in which there are as great a number of workers as in other departments of medicine, hence a new book devoted to legal medicine at the present time is especially welcome. Dr. Herold endeavours in this book to give the general principals and leading facts of medico-legal questions as accepted at the present time in a condensed form, drawing his information from the more elaborate and classic volumes now available, as well as from his own personal experience which has been not inconsiderable. The author states that in the present volume everything

that is practical and useful has been inserted, and all idle and superfluous questions which are still *sub judici* are dispensed with.

All the subjects usually considered in a work of this kind are taken up and given the most modern treatment, so that the general practitioner may even in the hurry which frequently characterizes his association with medico-legal cases become in a brief period posted in the latest information on the points at issue.

In the first part poisons are discussed in detail ; the medical and legal definitions of poisons, such as evidences of poisoning, rules to be observed in poison cases, their classification. Each one is then taken up in detail. An interesting chapter is the one on ptomaines and other putrefactious products. A number of these are referred to, and the subject of embalming from a medico-legal standpoint discussed.

In the second part Forensic medicine proper is taken up and occupies the bulk of the book from pages 145 to 607. One learns here all relating to the powers and duties of Coroners, the Coroners' and Criminal Courts, evidence of ordinary and expert witnesses, signs of death, medico-legal autopsies, identity of living and dead, etc. Chapter 23, on Hairs and Fibres, is an interesting one, and discusses fully a subject scarcely mentioned in some of the older works. The character of the hair on different parts of the body is minutely described, and the diameter and length given in detail. The various fibres that might be mistaken for hair described, the hairs on animals are differentiated, the effects of reagents on hair described, and then a number of medico-legal questions in connection with hair discussed.

The examination of blood stains and everything relating to blood from a medico-legal standpoint is scientifically presented, and this may be stated of most of the chapters, especially those on wounds, hanging and drowning, criminal abortions, infanticide and rape. This work will prove a boon to the general practitioner, and is an ideal text-book for the student.

Yellow Fever Clinical Notes. By Just Touatre, M.D. (Paris). Former Physician-in-Chief of the French Society Hospital, New Orleans, member of Board of Experts Louisiana State Board of Health. Translated from the French by Charles Chassaignac, M.D. President New Orleans Polyclinic, editor New Orleans Medical and Surgical Journal, etc. Published by the New Orleans Medical and Surgical Journal, Ltd., New Orleans, 1898.

This monograph was written in French and then translated by Dr. Chassaignac and first published as the present original edition.

Dr. Touatre gives here his experience in treating over two thousand cases of yellow fever and covering a period of thirty years of study, during which time he made observations of nine epidemics.

The peculiar pulse rate in reference to the temperature is dwelt upon as being pathogenic of this affection. The pulse gradually falls during the first three days while the fever may be rising ; some fifty charts are given which are of exceeding value as illustrating

this and other points in the course of this affection. Chapters follow on the disease as it occurs in children, its diagnosis, prognosis and treatment. He considers the discovery of Sanarelli to be genuine and his microbe the pathogenic bacillus of yellow fever. It is claimed that agglutination of the bacilli occur when exposed to the blood serum of a yellow fever patient, so that the same diagnostic test can be applied as in typhoid fever. This practical and exhausting monograph cannot but be welcomed by those who have to do with this scourge of the south.

Transactions of the American Pediatric Society. Ninth session. Held in Washington, D.C., May 4, 5 and 6, 1897. Edited by Floyd M. Crandall, M.D. Volume IX., reprinted from the Archives of Pediatrics, 1897. Forwarded by Dr. Samuel S. Adams, Washington, D.C.

This forms a neatly bound volume of over two hundred pages. It contains lists of officers and members; the President's address on the evolution of pediatric literature in the United States and twenty-four papers, many of them being of the greatest interest and written by leading authorities in pediatrics.

PUBLISHERS' DEPARTMENT.

SAMMETTO IN GENITO-URINARY DISEASES.

I have used Sammetto in my practice for the last five years, and find it has no equal in diseases of the prostatic portion of the urethra, in pre-senility, sn that peculiar condition existing in anæmic and chlorotic girs just entering womanhood, and all abnormal conditions of the reproductive organs, in either sex, depending on a debilitated condition of the general system. Sametto has never failed me in senile prostatitis, or enlargement of the prostate gland in aged men.

J. L. SMITH, M.D.

DURAND, Mich.

SAMMETTO IN HYPERTHROPHY OF THE PROSTATE—ALSO IN CYSTITIS.

I have used Sammetto myself for hypertrophy of the prostate, from which I have suffered for fifteen years. My age is eighty-three years. I have found out the value of Sammetto, and am persuaded that this remedy will cure me entirely. I prescribed it for two of my patients who suffered with cystitis, one forty years of age, was perfectly cured from the use of two bottles. The other, sixty years of age, thinks he will never stop it. I think so much of Sammetto that I, for the first time in my life, feel induced to recommend the same to any physician.

ISAAC SAALFELDT, M.D.

CHICAGO, Ill.

THE PROPER TREATMENT OF HEADACHES.

J. Stewart Norwell, M.B., C.M., B.Sc., House Surgeon in Royal Infirmary, Edinburgh, Scotland, in an original article written especially for *Medical Reprints*, London, Eng., reports a number of cases of headache successfully treated and terminates his article in the following language:—

"One could multiply similar cases, but these will suffice to illustrate the ef-

fects of antikamnia in the treatment of various headaches, and to warrant the following conclusions I have reached with regard to its use, viz.:—

(*a*) It is a specific for almost every kind of headache.
(*b*) It acts with wonderful rapidity.
(*c*) The dosage is small.
(*d*) The dangerous after-effects so commonly attendant on the use of many other analgesics are entirely absent.
(*e*) It can therefore be safely put into the hands of patients for use without personal supervision.
(*f*) It can be very easily taken, being practically tasteless."

Sir Henry Irving's lecture on The Theatre in its Relation to the State, delivered at the University of Cambridge June 15, is reproduced in full in *The Living Age* for July 30. No one could be more competent than the distinguished actor to treat such a subject.

An interior view of existing political conditions in Italy, and especially of the crushing financial burdens which are the cause of wide-spread discontent, is given in an important article translated from the leading Italian Review, the *Nuova Antologia*, in *The Living Age* for July 23.

The naval problems to be solved in the War are discussed by the English expert, Mr. H. W. Wilson, in an article which *The Living Age* of July 30 reproduces.

Recent novels of American life form the subject of an entertaining and on the whole discriminating paper in the *Edinburgh Review*, which American readers will find in *The Living Age* for July 16.

SOCIALISM AND THE SOCIAL MOVEMENT IN THE NINETEENTH CENTURY.

By Werner Sombart, University of Breslau, Germany. Translated by Anson P. Atterbury, pastor of the Park Presbyterian Church, New York. With introduction by John B. Clark, Professor of Political Economy in Columbia University.

THE GROUND WORK OF SCIENCE.

A Study of Epistemology. By St. George Mivart, F.R.S. This will form the second volume in "The Science Series."

STUDIES OF A BIOGRAPHER.

By Leslie Stephen, author of "Hours in a Library," etc. In two volumes. The work covers such subjects as National Biography, The Evolution of Editors, John Byron, Johnsoniana, Gibbon's Autobiography, Arthur Young, Wordsworth's Youth, The Story of Scott's Ruin, The Importation of German, Matthew Arnold, Jowett's Life, Oliver Wendell Holmes, Life of Tennyson, Pascal.

CANADA
MEDICAL RECORD

AUGUST, 1898.

Original Communications.

CASE OF GENERAL PARALYSIS.*

By FRANCIS W. CAMPBELL, M.D., L.R.C.P., London, D.C.L.,
Prof. of Medicine, University of Bishop's College Faculty of Medicine, Montreal.

MR. PRESIDENT AND GENTLEMEN :

Dr. Baudwy, in his work on Diseases of the Nervous System, says, " Never lose sight of the fact that paralysis is always a *symptom*, never a *disease*. If you always recollect this you will invariably seek to make a correct diagnosis of the cause." Whether this is possible in all cases is a matter of grave doubt. Certain it is that in the case which I will this evening report to the Society I was and am still unable to positively satisfy my own mind as to the pathological condition which was present. As the paralysis was all but entirely motor, sensation being but comparatively little affected, I incline to the belief that the *corpus striatum*, generally recognized by physiologists as the generator of motor power, was the seat possibly of some extravasation which under the influence of the ergot was arrested, and by the iodide of potassium caused to be absorbed. The slight symptoms of impaired sensation which were present may have been due to the sympathy of the *thalamus opticus*, which, as is well known, is most intimately connected with the *corpus striatum*. Of course this is only theory, but, as the patient fortunately completely recovered, it is all I or any one else can offer in explanation.

Archibald Ferguson, aged 21 years, 5 ft. 9½ inches high, weight 132, of spare habit and by trade an engraver, con-

* Read before the Medico-Chirurgical Society of Montreal.

sulted me for the first time on the 1st of Feby., 1879, complaining of a slight numbness in his fingers and inability to smartly jerk the graver (an instrument of his trade), also a weakness and numbness in his limbs, and difficulty in walking over uneven surfaces. This condition he had only noticed during the previous two or three days. His previous health had been excellent, and his habits of life fairly regular. Never been a teetotaller, but always temperate. Never has had syphilis, but in Sept., 1878, had a gonorrhœa, for which he was treated by a physician. Took balsam of Copoiba, which induced a very copious "Copoiba rash," and as it was mistaken for Small-Pox, he was sent to the Small-Pox Hospital, where he remained four days, when he was discharged. He continued in good health, and regularly attended to his work. On the 26th of Jany., 1879, he took a cold bath, and when but partially dressed he went out on a gallery and exposed himself to a low temperature for several minutes. About the 29th of Jany. first felt his fingers numb, and noticed that he had difficulty in guiding his tools; also felt his feet heavy, but had no sensation of what is commonly described as "pins and needles" in them. His condition 1st Feby. as noted by me is as follows:—"Considerable loss of power in right hand, not so much in the left; legs and arms, he says, feel heavy and numb. When sitting has perfect power over the lower extremities, can move and place them where he desires. Sensation seems perfect; is able to detect readily the touch of a finger or of two fingers, and when the feet are rapidly touched in succession is able to follow closely and correctly. Is able to distinguish two compass points at a distance of half an inch. Reflex excitability slightly impaired. On attempting to rise there is much stiffness in his movements, and he assists himself slightly by putting both hands to the chair. On walking he raises his feet higher than is natural, and replaces them on the ground in an uncertain floundering way. Being blindfolded no difference is detected in his manner of walking. Placed him on the sofa and examined his spine very carefully, but could not discover any point of tenderness. Ordered him gr. viii. of iodide of potash with vi. gtts. tinct. of nux vomica every 4 hours.

February 5.—Patient returned to my office this evening. Stated that on the way up, while crossing a street, he had fallen, owing to sudden weakness in his limbs. His condition as noted this evening is as follows : " Numbness in fingers and legs increased ; has now also some numbness in swallowing. Is able to walk, but still lifts his feet with an unsteady gait. In replacing them there is much loss of power, it being done apparently with much uncertainty. While testing his walking capacity, in turning he would have fallen had I not caught him. Bowels and bladder quite regular. Is quite conscious when he has the desire to evacuate both, and can eject a stream of urine with some force. Pulse 84, full and regular. Tongue clean and appetite good. Has not any headache ; ordered mustard to the whole length of the spine.

February 6.—To-day was sent for, found him sitting in a chair, still complaining of a feeling of weight and numbness in the legs, also numbness in hands and during the act of swallowing. While sitting is able to retract his limbs and strike them out with force, the left better than the right. Able to walk as mentioned in yesterday's report, but has to turn with great care or he will fall. Pulse 82, temp. 98½. Tongue clean and appetite fair.

February 8.—Paralysis seems to be increasing, other symptoms as before. Sensation is good.

February 11.—To-day met Dr. R. P. Howard in consultation. Is now only able to walk with assistance. Gait is unsteady and uncertain, feels his legs of great weight. No feeling of pins or needles in them. Right leg and arm has less power than the left. Some numbness on swallowing, but not very decidedly marked. Reflex action all but lost. Spine examined very carefully, and did not find any point of tenderness. Sensation in both feet almost perfect. Diagnosis uncertain. Suggested chronic inflammation at the base of the brain. Ordered dry cups to the nape of the neck and a mixture containing iodide of potash ten grains, and fluid ext. of ergot (Tilden's) ʒi. every four hours. Has been sitting up, but is ordered to bed.

February 12.—Condition worse than yesterday. Numbness in swallowing very distinct, also especially well marked

at the tips of all the fingers. Has much less power in limbs, arms about the same. Applied 6 or 8 cups to the nape of the neck. Pulse 96, temp. 99.

February 15.—Patient has during the last two days rapidly got worse. Power in upper extremities decidedly less. Is, however, able to move them fairly well. Limbs are now totally paralysed, cannot make the slightest movement. Reflex excitability entirely lost. Sensation is, however, hardly as perfect as on Feby. 1st. Two points are distinguished fairly well one inch apart, well at 1½, and perfectly and rapidly at 2 inches. Touching with rapidity one leg and then the other with the finger patient is able to follow correctly. Bowels costive, for which he was ordered castor oil. Urinates freely, but not with much force. To-day applied the cups along the entire length of the spine. Appetite fairly good.

February 21.—Paralysis of legs still perfect. Other symptoms as before. Ordered an addition of ten drops of tinct. of nux vomica to each dose of his mixture. Discontinued cups to spine and began the use of Faradic electricity three times daily. The electric excitability of the muscles of the arms and thighs is good. Those of the leg respond very feebly. Pulse 88, temp. 98.

February 26.—Thinks that the numbness in swallowing is less; also less in fingers; arms have a little more power. A faint attempt at movement of the toes is discernible. Bowels open every day. Urinates freely—and the urine is a fair specimen of healthy urine. Pulse 88, temp. 98.

February 28.—Feels his arms getting stronger—the right especially has gained during the last two days. Numbness in swallowing about gone. Much less in fingers, which now perspire freely—before being dry. Is able to-day to make the faintest motion toward flexing the right leg on the thigh, some slight movement in toes of both limbs; other than this no movement on left leg. Muscular waste of limbs has been gradual, but not more than was to be expected from want of use. There has been little muscular waste of the body; sensation in both legs as last reported. Electricity still applied thrice daily. Bowels move daily. Pulse 88, temp. 98.

March 5.—The improvement noted in last report continues; arms are both much stronger, the right is now quite equal to the left; limbs continue to improve, the right one especially. Is now able to lift it from the bed, and attempts to pass it over the opposite knee, in which, however, he fails. In the left there is a decided improvement, but not equal to that of the right. Muscles of legs now respond much better to the electric current. Reflex excitability is returning. Feels much better in health, appetite good, tongue clean. Pulse 84, temp. 98½.

March 10.—Patient continues to improve. Is to-day able to lift the right leg so as to pass it freely over the left knee, also able to flex it, but has not much power to rapidly extend it; left leg is improving, but is not so advanced as the right. Sensation has decidedly improved. Two compass points can be distinguished as on Feb. 1, viz., ½ an inch apart, about the same in both limbs. The feet still feel heavy. General health improving.

March 15 —To-day is able to cross with ease either leg over the other, and to flex and extend them tolerably rapidly. Electric excitability so great now in all the muscles of both legs that the force of the current has to be reduced. Numbness in the throat when swallowing is entirely gone; in the fingers it still remains to a very slight extent. Patient describes it not so much a numbness as a feeling as if the skin over the tips of the fingers was thickened. Notices an improvement in urinating (although this function did not ever seem to be very markedly affected); can eject the stream at once, and with more force. Appetite is good, and bowels are regular.

March 20.—Improvement has steadily continued, and he is now able to move his legs freely in bed. Is to sit up for two hours.

March 21.—Was up yesterday for two hours, and was able to bear some weight on his legs. The heavy feeling in his feet is gradually disappearing.

March 25.—The improvement during the past four days has been steady and marked. Has been up every day, gradually increasing the length of time till to-day he was able to sit up eight hours. There is now not any numbness in

fingers, and the power in his legs has gained so rapidly that during my visit he was able to walk fairly well in a narrow passage, by supporting himself with his hands placed upon the wall. Reflex action rapidly improving. General health is rapidly improving. From the 21st of February to this date electricity has been applied three times daily. Instructions given that for the future it is only to be applied morning and evening. The mixture which from the same date has been given every four hours is to be given three times daily.

May 1.—Still improving; is now able to walk without any assistance. Is in excellent spirits at his rapid recovery.

May 5.—To-day went down stairs without assistance. Heavy feeling in legs about gone.

May 12.—Walked to-day from Craig st. to the river and back; had some slight difficulty in lifting his feet at street crossings, otherwise is able to walk well. As his appetite is failing, his mixture is ordered to be discontinued, and replaced by another containing quinine, phosphoric acid and nux vomica.

May 21.—Walked to my house to-day, and says he is able to walk about as well as ever he did. Reflex action is natural, and the muscles of his legs are gaining fullness.

July 1.—Patient returned from the country looking hale, hearty and strong, and went to work. He has continued well up to date.

SOME LEADING EUROPEAN GYNÆCOLOGISTS.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., England, Montreal, Canada.

This letter will give a short description of what I saw at Leipsic and Brussels, and will conclude my series of three articles on the above topic.

Sänger, of Leipsic, is a man of about forty-five years of age, and, like all the great men I have seen over here, is a tremendous worker. Although he is a titular professor of the University he has no beds at the public hospital, but he invited me to his private hospital, No. 24 Kœnig Strasse, where he has twenty-five beds and attends rich and poor alike. He told me that he had had no death there since seven months,

during which time he had performed two hundred and twenty operations, seventy of them being laparotomies, either vaginal or abdominal. He attributes his success to his very vigorous asepsis, he and all his nurses and assistants preparing their hands for twenty minutes before the operation. Since ten years he has been using coarse sand and soft soap for his hands, followed by alcohol and then sublimate water. He uses nothing but silk, which is prepared as follows: 1st, it is boiled in 1-100 of washing soda to remove the dirt and then in Bergman's solution, namely 10 of sublimate, 200 of alcohol, and 800 of water. It is then wound on little pieces of wood on which the size is marked, and kept in sublimate alcohol. The patient is always shaved the day before, and her skin is prepared with soap and water, ether and alcohol and sublimate. The preparation of the patient occupied three-quarters of an hour. The assistant in charge of ligatures burned them instead of cutting them. The first operation was for the removal of a five pound fibroid by abdominal hysterectomy. He removed it with clamps very quickly, and then tied each artery separately with No. 6 silk. He only crosses his first knot once. His hemostasis is very perfect, and he keeps on tying until the wound is absolutely dry. His method of sewing up the abdominal wound is peculiar ; he passes silk sutures on two needles from within, every centimetre apart, including the whole abdominal wall, but only the very edge of this skin. Before tying them he puts in another row of interrupted No. 3 silk sutures so as to bring the fascia and muscles together exactly and these remain permanently. Between the through and through stitches he placed superficial silk ones every half centimetre so that they were very close together. The wound was then covered with a light strip of iodoform gauze and covered with a large strip of plaster very carefully sealed. Next day he did a precisely similar operation. He takes about one hundred minutes to do the operation, being the most careful man I have yet seen. Ether was the anæsthetic used, and the inhaler was a large wire mask covered with rubber, completely covering the face, so that a comparatively small quantity was employed. As the patient was only 26 years of age he left one ovary and tube in the peritoneal cavity so as to prevent her from having the

nerve storms of the artificial menopause. The third morning he removed a hernial sac from the left inguinal canal, which contained a rudimentary uterus, a tumor of the right tube and ovary and a rudimentary left tube. This was a very rare case, there being only a few on record. The fourth morning he performed implantation of the ureter into the bladder. I was fortunate in seeing this operation, as this was only the third time that it has been done in Germany—once by Wurtzel and once by another operator whose name I forget, although it has been done in America several times, I think by Boldt, of New York. On opening the abdomen he found that she had closed tubes, and that one ovary contained a large cyst. He cut out the cyst and left the rest of the ovary, after carefully sewing up the flaps with fine interrupted silk ligatures. He opened up the closed tubes by cutting off the fimbriæ and sewing the mucous to the peritoneal edge so as to make a new pavilion. The patient, who was a young woman, had had a very severe first confinement, during which the uterus and ureter were torn across, and when they healed there was a utero-ureteral fistula and her urine poured constantly from the cervical canal. Sänger began by cutting the ureter off level with the uterus after putting a temporary ligature on it. He then sewed up the hole in the uterus, after which he dissected out the ureter from its original home beside the iliac artery until he had it free to a distance of six inches. He then closed the long opening in the peritoneum, after which he threaded the ureter attached to a bodkin, so to speak, between the peritoneum and the abdominal wall, into the top of the bladder where he carefully stitched it. I have since heard that the operation was a perfect success. I was perfectly delighted with the few mornings I spent with Sänger, and I have no hesitation in classing him among the world's gynæcologists of the first rank.

Zweifel, of Leipsic, is the *geheimrath* or chief professor of gynæcology, and has a large number of beds in the public hospital for women, which is a spacious and beautiful building. He is about sixty-five years of age. I saw him perform a very difficult operation for vesico-vaginal fistula in a woman who had had hysterectomy several years before in another

city. As the day was dark he used a very nice electric headlight supplied from the street current. The nurses did all the shaving and scrubbing in the operating room while the assistants were getting ready. As it was high up he had the greatest difficulty in paring the edges and in passing the ligatures, and then he found that in paring the fistula he had opened into the peritoneal cavity. He at once, without rising from his seat, made a nine-inch incision in the abdomen, and instead of using Trendelenburg's posture to get the intestines out of the way, an assistant took the bowels out of the abdomen and held them back so as to give him room, and in this he had great difficulty. As Leipsic is Trendelenburg's town, I was surprised to see any one in Leipsic open the abdomen with the patient horizontal. He finally succeeded in closing the fistula so that it stood the test that the bladder being distended with water none escaped either into the peritoneum or into the vagina. He closed the abdominal incision with one layer of catgut for the peritoneum, a second for the fascia and a third for the skin with a sort of sewing-machine lock stitch, with two needles, which I had never seen elsewhere, and which made a fine union of the skin. His assistant then operated on a ventral hernia, which had followed laparotomy. As he did not employ Trendelenburg's position he had a good deal of difficulty in keeping the bowels in. I saw a very interesting operation performed by Dr. George Trendelenburg's assistant. It was a colotomy for cancer of the rectum and uterus, and instead of opening the colon in the inguinal region, he made a median incision near the epigastrium and drew the transverse colon out two or three inches and sewed it there. Then he made another incision two or three inches to the left of the first, but only through the skin. The loop of intestine was passed under the skin and brought out of the second incision and carefully stitched there. The first incision was carefully closed and sealed with collodion, after which the bowel was opened at the second incision and the mucous membrane sewed to the skin, where the pent up foeces poured out. By this ingenious operation invented by Wurzel and Van Hackar, of Innsbruck, perfect control of the artificial anus is obtained, simply by pressing a pad over the

colon as it passes under the skin, and the patient can have one or two evacuations a day.

Trendelenburg, of Leipsic. Although not a gynæcologist yet he has next to Lister done more for gynæcological surgery than any other man living, and I made him a visit especially to tell him that we thought of him and thanked him every time we did an abdominal hysterectomy or other piece of difficult pelvic surgery. Those of my readers who have never seen a bad pair of pus tubes removed in the pre-Trendelenburg days can have no idea of the misery which the operator endured nor of the danger to which the patient was exposed. As the work was all done in the dark the intestines were often torn or infected without our knowing it, or some little artery would be steadily pumping into the peritoneum without being seen. Now all that is changed; the intestines are out of the way, and we cover them with sterilized towels, and we have a large well lighted space to work in, so that we tie every oozing point until the peritoneum is perfectly dry and clean. As I did not see any nice table there it would be quite appropriate if the abdominal surgeons of America were to present him with a solid silver Trendelenburg table. I attended one of his clinics at which there were over a hundred students present, and it was easy to see how much he was beloved by them. He is a man of over fifty, but of exceeding modest appearance, and, as he called batches of students down to the arena to examine the patients who were wheeled in, he gave each one the marks he had earned.

Jacobs, of Brussels, although only thirty-five years of age, has by his enormous industry reached one of the highest positions in Europe. I am told that he is not connected with the University, the position of professor of gynæocology there being held by a military surgeon; nor has he any beds at any of the public hospitals of Brussels; but he has forty-five beds at his own private hospital, which is the most beautiful I have yet seen either in Europe or America, its cost having been over a hundred thousand dollars. The nurses are Catholic sisters. He has opened the abdomen by the vagina, mostly for hysterectomy, seven hundred times, with a death rate of less than two per cent., and he has performed

over one hundred abdominal laparotomies for removal of the uterus and appendages with less than two per cent. of deaths. His method of disinfection is peculiarly his own, so I will describe it : 1st, he scrubs the patient with green soap dissolved in alcohol and shaves her himself. If the operation is a vaginal one, then he uses a sponge on a holder to scrub the vagina. The field of operation is then scrubbed with equal parts of saturated solution of carbonate of ammonia and biborate of soda. He then scrubs with alcohol, then with two per cent. of formaline. The first morning he did a perineorraphy, taking a great deal of time to do it, but doing it beautifully, using black silk for most of the stitches, only three of them being of silk worm gut. The stitches were only one-eighth of an inch apart. He then sealed the wound with alternate layers of iodoform and collodion, so that it was quite air and water proof. He obtains his silk from a Bordeaux chemist already sterilized, wound on glass tubes and inclosed in other tubes sealed with a rubber band. The Bordeaux firm buys it from a Philadelphia firm, which in turn buys it from an English firm, which in turn obtains it from China. He has also the daintiest operating room I have ever seen, all the tables being of polished brass and plate glass. Next day he removed the uterus, tubes and ovaries by the abdomen for double pyosalpinx, an ovarian cyst and a fibroid tumor. One peculiarity about his method is that he cuts first and ties only the vessels which spurt as he goes along, his object being to put four or six ligatures at the most on the isolated arteries and not on the nerves. And this reminds me of his answer to the important question which was the main object of my visit to Brussels. Why, I asked, did he abandon vaginal hysterectomy with clamps in which he had become so wonderfully successful ? Because, he said, with the clamps you compress the nerves and cause the woman so much suffering for two days that it takes her two weeks to get over it, while if you tie only the arteries and close up the peritoneum she will be practically well the next day. In this case, as the tubes were adherent to the whole anterior surface of the rectum, he carefully detached this with scissors until he had entirely freed the two large tubes as thick as sausages. He then removed them in one

piece with the uterus at the level of the internal os, and cauterized the cervical canal, and sewed the two flaps of the cervix together. The denuded rectum was cleverly covered by sewing the anterior flap to it. He had the fewest assistants I have yet seen, one of them being dispensed with by using an abdominal speculum or retractor at the lower end of the incision, and this was held tightly drawn down by having a chain and a weight attached to it, and he did not have any side holders. In closing the abdomen he used thin buried silk worm gut for the peritoneum and fascia, and larger ones for the fat and skin, and he dressed it with plain dry sterilized gauze; but this was covered most thoroughly with diachylon plaster, several layers, each piece overlapping the other. He was very careful, and took nearly two hours to the operation, chloroform being used; he tells me that he considers half an hour more of no consequence compared with the importance of thorough hemostasis. Like Sänger, he brings the skin sutures very near the edge of the wound.

Next day he removed one ovary and tube from a young woman, although he told me that his experience with conservative surgery was far from satisfactory. In cases in which he had cut out the half of an ovary they had suffered for many years afterward from cicatricial contraction in the portion that was left, while in cases in which he had removed the uterus for fibroid, leaving the ovaries, the latter had, within two years, completely atrophied. Moreover, he said that, since we had ovarian extract at our command, we no longer have anything to fear from the artificial menopause. To every woman when this occurs he gives extract of cows' ovaries every morning in a glass of port wine which makes it so palatable that they do not know they are taking it. He says he has even cured insanity with it. The next day he removed tubes and ovaries from a woman whose peritoneum was covered with miliary tubercle, which he said he had several times seen cured by laparotomy. He allows his patients to eat heartily the day before the operation, but not for several days after; he does not fear distension of the bowels, which, he says, always means sepsis. He never gives strychnine, but gives them plenty of morphine if they are in pain. He thinks that the high death rate of certain cele-

brated operators is due to their working at such great speed that rigorous asepsis is impossible. Next day he removed a cancerous uterus by the abdomen, first getting rid of the appendages and fundus down to internal os. He then split the cervix down the middle so as to get his left forefinger into the vagina, previously stuffed with sublimate gauze, rendering the removal of the cervix very easy, as he had only to cut it all around as it lay on his finger, at the same time feeling if the vagina was infiltrated. He also feels if there are infected glands in the broad ligament and removes them. In all his work Jacobs is an artist, using his knife like a paint brush, while in his plastic work one would think he was sketching with a pencil. I had the pleasure of spending an evening with him at his palatial residence, 53 Boulevard, Waterloo, full of rare works of art, and was astonished to see him and one of his assistants sit down at the piano and play Wagner's most difficult pieces at sight, while another sang. This concludes my series of three articles, and I trust that my efforts to share the priceless privilege I have enjoyed of seeing these great men at work will be appreciated by those who cannot get away, and who must see these things through the eyes of others.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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BUZZING IN THE EARS AND ITS TREATMENT BY CIMICIFUGA RACEMOSA.

The *Medical Bulletin* (July) contains a translation from an article by Drs. Robin and Mendel, an epitome of which we give.

The nature of the sounds are obscure; they probably represent the reaction of the auditory nerve to all direct or reflex excitations. The buzzing occurs mostly in the course of different diseases of the ear, external, middle, or internal, especially auricular sclerosis, also in various neuroses, neurasthenia, hysteria. The noises are continuous day and

night and very varied in character, resembling the buzzing of a fly, the roar of steam, the splash of waves, or the simmering of a kettle, sometimes musical. The attacks are occasional or persistent. If wax is the cause, its removal is indicated ; and if otitis or a polypus, their appropriate treatment removes the symptoms. For the other varieties the air-douche, the instillation of iodized vapors, electricity, bromides, and iodides have been used with but indifferent results. Cimicifuga he has found to be almost a specific. In large doses it causes nausea, vomiting, depression of strength, headache, and intoxication. On the heart, it resembles the action of digitalis. It has been used as a stomachic and cardiac tonic, and in chorea, headache, and neuralgia, and as an expectorant, as an antispasmodic in parturient women, a sedative and hypnotic in pruritus and as a diaphoretic. 10 to 60 drops of the fluid extract may be given daily, the average quantity being 30 drops. The more recent the development of these subjective sounds the more efficient is the treatment, and is not of much use if case is over two years' standing. The tinnitus will usually disappear within one day after beginning the treatment.

THE ANTAGONISMS OF DISEASE.

The co-existence of two or more distinct diseases in the same subject is an interesting fact, In many instances the different affections may be traced to the operation of a common cause, and may, therefore, be looked upon as parts of one general process. In other cases, however, the co-existent maladies are essentially distinct in origin and nature.

The converse of the preceding statement occasionally happens, and the advent of one disease is the signal for the improvement of another which had previously been in existence. In some cases the first ailment returns upon the cessation of the second disorder. In other instances the first is cured by the evolution of the second malady. It has long been remarked that the occurrence of pulmonary emphysema militates against the development of pulmonary tuberculosis. The course of vaccinia exerts a beneficial influence upon that of whooping-cough, etc. So marked are these conflicts between certain affections that it has been proposed to drive out one disease by the introduction of a second which is known to be hostile, and, indeed, the suggestion has, in some cases, been acted upon in practice.

This is undoubtedly a very interesting subject for clinical investigation, but it does not appear to have been, as yet, very much cultivated. It has, however, been of late made the subject of an excellent paper read by Dr. Harry Camp-

bell before the Brixton Medical Society and published in the *British Medical Journal.** Dr. Campbell divides his remarks into two heads : those relating to the prophylactic and those to the curative effects. The first class does not admit of much discussion, since our knowledge of such effects is limited. His second class our author subdivides into five groups: those which which act by metastasis, those which produce mechanical effects, the beneficial effects of trauma, of febrile disorders, and, finally some miscellanous cases showing the same beneficial action of disease. The abrupt variations in the symptomatology of functional nervous affections is not so surprising, since we have long ago learned to recognize this as a characteristic feature of such disorders. It is not so plain, however, why a gonorrhœal discharge should disappear upon the occurrence of epididymitis, why rheumatism or gout should leave one joint to fasten upon another, or why gout should suddenly transfer its manifestations from the articulations to the viscera.

From time immemorial the relation of diseases of the skin to those of the digestive organs and general system has been recognized. The variations in the condition of the skin, however, are not always in accordance with those of the internal organs, for in not a few instances the disease upon the surface causes, or at least is coincident with, amelioration of the internal disorder. Several interesting examples of this influence are related by Dr. Campbell. He mentions a case of eczema which alternated in intensity with severe dyspepsia, the latter being improved when the skin was diseased and *vice versâ*. Another case was that of a patient who twice suffered from urticaria, which on each occasion terminated in a copious hæmatemesis. He refers to the alternation of glycosuria and eczema, deafness and vertigo, eczema and asthma. It is known also, that eczema may depend upon the presence of renal disease, and it is quite probable that the cutaneous disease is excited by the elimination of morbid material which has a toxic effect upon the blood and tissues when retained.

Dr. Campbell refers briefly to a number of cases in which an injury acted beneficially upon the health. Rheumatism, psoriasis, and disorders of the nervous system have been improved or cured consecutive to an injury or operation-wound. Many of our readers have doubtless witnessed such occurrences.

The improved conditions of nutrition which not infrequently follow a severe attack of fever are widely recognized.

* "The Beneficial Effects of One Disease as Regards Another." By Harry Campbell, M.D., F.R.C.P., *British Medical Journal*, April 30, 1898.

It is not at all uncommon for the general health to improve notably after an attack of typhoid fever. When fever occurs in a diabetic the sugar may temporarily disappear from the urine. Fever may cause the suppression of a purulent discharge or the absorption of callus. Chronic enlargement of the tonsils may subside temporarily or permanently under an acute fever like scarlatina or pneumonia. Dr. Campbell instances cases of improved health following cholera, rheumatism cured by typhoid fever, anæmia cured by scarlet fever, etc.

The favorable influence of fever upon mental affections has long been noticed. Among the febrile disorders which have acted in this way is erysipelas. Lannois has recorded a case of epilepsy which was improved by erysipelas, but made worse by typhoid fever. In this connection we may refer to a paper recently published by Dr. Robert Hessler of the Central Indiana Hospital for Insane.* Dr. Hessler observed the case of an epileptic who was attacked by erysipelas. Prior to the acute illness the man had been subject to numerous convulsions. The erysipelas caused the temperature to rise to 104° and there was delirium at the crisis. After recovery from the erysipelas the convulsions practically ceased. The very few that occurred thereafter were light: *petit mal.* Encouraged by this result, he treated experimentally several cases of chronic epilepsy with erysipelas antitoxin. Decided benefit followed the injections, and in the opinion of Dr. Hessler, the results certainly justify a more extended application of this method of treatment for one of the most intractable of diseases. Dr. Campbell enumerates quite a long list of diseases which have been benefited by an intercurrent attack of erysipelas. Influenza, also, although it notoriously exerts, as a rule, such a depressant influence upan the nervous system, sometimes appears to have potent curative effects. Our author speaks of gonorrhœal cystitis and chronic catarrh of the upper respiratory track cured by influenza.

Finally, among miscellaneous cases showing the same beneficial action of disease Dr. Campbell mentions chronic rheumatism disappearing after the supervention of cancer, paralysis agitans removed by hemiplegia, migraine banished by an acute auditory affection, etc.

Such cases as Dr. Campbell has brought together are both interesting and instructive. We cordially agree with the concluding hope of Dr. Campbell that his paper will do something to stimulate inquiry in the direction indicated.—*The Medical Bulletin*, July, 1898.

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* "Epilepsy and Erysipelas," Journal of the American Medical Association, May 14, 1898.

THE SMEGMA BACILLUS.

J. L. Miller, B.S., M.D., in *Medicine*, July, 1897, contributes an article on the subject. This bacillus is one of several which stains in a manner similar to the tubercle bacillus and resembles it in size and form.

The cause of the retention of the stain is supposed to be a combination of fat or fatty acids with the protoplasm. Crystals of fatty acids possess similar tinctorial qualities to the tubercle bacillus. The points in the paper are included in the summary:

1. Over the entire surface of the body and exposed mucous membrane, and especially on the genitalia, bacilli are found which resemble morphologically and in tinctorial qualities the bacillus tuberculosis.

2. From the external genitalia they frequently gain access to the urine, especially in women, and may be a source of error in the examination of the urine for tubercle bacilli.

3. The smegma bacillus presents wide variations in size and form, thus rendering morphological differentiation frequently impossible.

4. While most smegma bacilli are most readily decolorized by any of the solutions commonly employed, occasionally they possess equal or even greater resistance than the tubercle bacillus.

5. Methods of decolorization where acids are employed alone are especially fallacious; acid alcohol or dilute alcohols, unless long continued, are equally unreliable. Better, but not free from error, is the use of absolute alcohol for at least five minutes; in ammoniacal urine, however, such prolonged use of alcohol may also remove the stain from the tubercle bacillus.

6. Attempts to remove the fat or fatty acids from the bacilli by ether, chloroform or other solvents fail to furnish us with a means of differentiation.

7. We must rely on means of excluding the smegma bacillus from the urine. It has never been demonstrated in the bladder, and apparently seldom invades the deep urethra; therefore, by cleansing the external meatus and withdrawing the urine with a catheter we can exclude this possible source of error.

THE INTRACELLULAR ROOTS OF THE GALL-DUCT SYSTEM, AS DEMONSTRATED BY NATURAL INJECTION, AND THE ICTERIC NECROSIS OF THE LIVER CELLS.

Dr. Gustav Fütterer, in *Medicine*, July, 1898, concludes from experiments and the results of others that:

1. The roots of the bile-duct system are inside of the liver cells, as intraprotoplasmic channels, which form complicated networks, and which closely surround the nucleus.

2. An intranuclear system of bile channels communicating with the intraprotoplasmic channels does not seem to exist.

3. The intraprotoplasmic channels are in direct communication with the bile capillaries.

4. Under normal conditions the intraprotoplasmic channels are not visible, and if stagnation of bile distends them and makes them visible as networks, this happens at the cost of the protoplasm and the life of the cells.

5. While the protoplasm under such conditions perishes very quickly, the form and structure of the nucleus remain intact for a long period.

6. The bile is secreted in the form of minute drops, which first appear around the nucleus.

7. We should now use the terms: *Bile ducts*, *bile capillaries* and *bile channels*.

CONTRIBUTION TO THE STUDY OF PARALYSIS IN DIPHTHERIA.

In the *Archiv für Kinderheilkunde*, Bd. xxiii, Heft 1-3 Katz gives the result of his pathological research in three cases of death from paralysis in diphtheria. He examined very carefully the whole central and peripheral nervous system in each case. The basal ganglia, internal capsule and cerebral cortex showed no changes; but in all three cases, especially in the first, alterations were evident in the structure of the ganglionic cells, the peripheral and central nerve fibers and muscles, accompanied by more or less marked changes in the spinal cord, medulla oblongata, and pons. Of the cranial nerves the oculomotorius, trochlearis, abducens, facialis, glossopharyngeus, hypoglossus and vagus were more or less diseased. The peripheral nerves were moderately diseased in only one case; the phrenic nerve was extensively diseased in another. Hemorrhages in the nervous system were seldom found. A varying grade of fatty degeneration of the muscle fibres of the diaphragm were present.

To summarize his findings, the most prominent pathological feature was disease of the ganglionic cells, manifested either in direct necrosis or in reparable degeneration, chiefly fatty, of the cell elements. Furthermore, nerve fibers in trophic relation to the ganglionic cells showed degeneration. In the milder grades of ganglionic cell disease, the medulla of the nerve fibers was slightly affected. The

degeneration occurs usually earlier and with more marked severity in the medulla oblongata than in the spinal chord. Due consideration must be given the fact that disease of the medulla oblongata is more readily detected than that of the spinal cord.

Clinically, the pathological disturbances in the nervous system are manifested during convalescence in recoverable pareses, weakness, loss of appetite, slight tremor, and apathy. Paralysis of the soft palate is particularly common, since in addition to nuclear involvement the part is affected locally. The changes in the nervous system arise through the action of the diphtheria toxins. The cell activity may be disturbed immediately, but as a rule not until degenerative changes appear.—*Medicine.*

THE VALUE OF ELECTRICITY IN FUNCTIONAL DISEASES OF THE STOMACH.

Max Weiss summarizes his experience of the treatment of functional disorders of the stomach by electricity as follows (*Treatment*, June 9, '98): In paretic conditions of the œsophagus and cardia (viz., rumination), galvano-faradization is of great value. One pole of a galvanic battery is connected with the opposite pole of the secondary coil of a Dubois-Raymond, the other (usually the anode) with a broad electrode placed over the sternum. The free pole of the secondary coil is connected with an electrode, which can either be introduced into the œsophagus or stomach by means of a sound, or placed over the inner margin of the sterno-mastoid. The sitting lasts five minutes if the electrode is used internally, ten if applied externally. Cases of gastralgia and of hysterical vomiting require external galvanization, with a large electrode applied over the dorsal vertebræ, and a smaller one over the epigastrium. Five milliamperes should be employed at first, and the strength of the current subsequently increased to twenty-five milliamperes. Obstinate gastralgia, due to the cicatrization of a gastric ulcer, often yields to a current of fifteen milliamperes. Motor insufficiency of the stomach, with dilatation, is best treated with internal faradization, which may be advantageously combined with massage. Internal electrical treatment is also of value in correcting secretory disorders of the stomach, excessive acidity usually requiring galvanization, and subacidity faradization. Enteralgias are considerably benefitted by systematic galvanization of the abdomen, with the cathode placed over the dorsal spine and the anode upon the epigastrium.—*The Charlotte Medical Journal*, July.

THE PHYSIOLOGICAL AND PATHOLOGICAL RELATIONS BETWEEN THE NOSE AND THE SEXUAL APPARATUS OF MAN.

Dr. John N. Mackenzie (*British Medical Journal*) states that an intimate physiological relationship exists between the sexual apparatus and the nose, and especially the intranasal erectile tissue, is evinced from the following facts : (1) In a certain proportion of women, whose nasal organs are healthy, engorgement of the nasal cavernous tissue occurs with unvarying regularity during the menstrual epoch, the swelling of the membrane subsiding with the cessation of the catamenial flow. (2) In some cases of irregular menstruation, in which the individual occasionally omits a menstrual period without external flow, at such times the erectile bodies become swollen and turgid, as in the period when all the external evidences of menstruation are present. (3) The monthly turgescence of the nasal corpora cavernosa may be bilateral or confined to one side, the swelling appearing first in one side and then in the other, the alternation varying with the epoch. (4) The periodical erection may be inconsiderable and give rise to little or no inconvenience, or, on the other hand, the swollen bodies may occlude the nostril and awaken phenomena of a so-called reflex nature, such as coughing, sneezing, etc. (5) In some cases there seems to be a direct relationship between the periodical engorgement of the nasal erectile bodies and the phenomena referable to the head that so often accompany the consummation of the menstrual act. (6) As a natural consequence of the phenomena above described, the nasal mucous membrane becomes, at such periods, more susceptible to reflex-producing impressions, and is, therefore, more easily influenced by mechanical, electrical, thermic and chemical irritation. (7) The condition (engorgement and increased irritability of the nasal mucous membrane) indicated above, together with the phenomena that accompany them, are also found during pregnancy at periods corresponding to those of the menstrual flow. There is also reason to believe that similar phenomena occur during the lactation and menopause. (8) Vicarious nasal menstruation is a familiar condition. It may precede the uterine flow, or it may occur from suppression of the normal flow. (9) This vicarious hemorrhage may represent menstruation during pregnancy, or it may appear toward the close of menstrual life, or after the removal of the uterus and its appendages. Vicarious nasal hemorrhages also occur in boys at or near the age of puberty. (10) There is a well-known sympathy between the erectile portion of the generative tract and other erectile portions of the body. (11) The occasional dependence of phenomena

referable to the nose during sexual excitement. The data derived from clinical observation are as follows:— (*a*) In a fair proportion of women suffering from nasal affections the disease is greatly aggravated during the menstrual epoch, or when under sexual excitement. (*b*) Cases are also met with in which congestion or inflammatory conditions of the nasal passages make their appearance only at the menstrual period, or at least are only sufficiently annoying at that time to call for medical attention. (*c*) Occasionally the discharge from nasal catarrh will become offensive at the menstrual epoch, losing its disagreeable odor during the decline of the ovarian disturbance. (*d*) Excessive indulgence in venery seems to imitate inflammation of the nasal mucous membrane. (*e*) The same is true of the habit of masturbation. (*f*) The co-existence of uterine or ovarian disease exerts sometimes an important influence on the clinical history of nasal disease. —*The Charlotte Medical Journal*, July.

THE ELECTRO-THERAPEUTICS OF RHEUMATISM.

Dr. Rainlar, in Codex Medicus : The electro-therapeutics of rheumatism are referable more specially to the sub-acute and chronic forms. In acute articular rheumatism no form of electricity is to be recommended. It is very valuable in the sub-acute and chronic forms and in gouty conditions.

There are five different modifications or phases of the current: (1) galvanism, (2) faradism, (3) static or Franklinic, (4) sinusoidal and combining the first two (5) galvano-faradic. Of these forms the galvanic, faradic, galvano-faradic, and static forms, are the most reliable in the rheumatic condition.

There are two ways of applying electricity: (1) constitutional, and (2) local. General or constitutional galvanism acts as a tonic or stimulant to the entire system. The local application to a muscle causes contraction and increased blood supply, thereby increased nutrition.

Where there is much muscular involvement, a primary and secondary current from the faradic coil of about three to five minutes' duration, applied directly to the muscles, is sufficient. At first use currents of moderate strength, the electrodes being well moistened with a saline solution, the current gradually being increased to the maximum power of endurance. This to be followed by weak, interrupted faradic primary currents.

Where the joints are affected galvano-faradic currents are applied over the joints from ten to fifteen minutes' duration. In almost all cases in sub-acute rheumatism at least

two sittings per week are necessary, while chronic cases require daily or not less than three treatments per week.

Case I. This case had previously been in bed for six weeks with inflammatory rheumatism. Subsequently the wrist-joints became enlarged and painful on pressure, and some of the extensor muscles of forearm were atrophied. A course of galvanic with occasional use of slowly interrupted primary faradic current was kept up for two months. when the case recovered without deformity.

Case II. Had severe pain in lower part and back of thighs. Pain so bad often had to lie in bed. Great pain on rising from bed in the morning. There had been a history of rheumatism.

Galvanism was applied to back, the anode being placed on the upper dorsal and cervical regions and the cathode over the lumbar. At the end of three months' treatment no tender spots or pain was present.

Case III. Patient female, age 34. Complained of loss of power in left leg. History of rheumatism. Muscles of calf of leg and thigh much wasted, cold and moist. Sensation much impaired. Pain more intense when in bed and sitting erect for any length of time. Galvanism to entire limb was used every day, and at end of two weeks the pain ceased entirely. The atrophied muscles had increased in size and contractile power. Applications then made every two days, when limb soon reached its normal condition.—*The Charlotte Medical Journal*, July.

THEORIES AND CONCLUSIONS ON THE MODERN TREATMENT OF TUBERCULOSIS.

Dr. Denison, of Denver, discussed this subject interestingly and intelligently at the Denver meeting of the American Medical Association. He said :

Representing the benefit to patients suffering from tuberculosis as 100 per cent. 45 per cent. are affected by climate and changes involving mental influence, exercise and out-of-door life ; 30 per cent. are due to good feeding, local supervision, and medical treatment ; 25 per cent. to inhaling, local medication, surgical interference, specific medication, and antitoxin treatment. So saturating the blood with creosote, for instance, that the bacillus will be stopped in its growth and the patient not be injured thereby, is, I think, a mere speculation. I doubt whether inhaled substances ever reach the air vesicles and terminal bronchioles where the disease is located. The more a lung is diseased with tuberculosis and the accompanying infiltrating and shrinking

process, the less is the possibility that inhaled medicaments can reach the affected parts. The reciprocal relation of diseased and healthy lung in the same thorax, and of the heart and blood within a given chest with reference to respiration, does not seem to me to have been sufficiently recognized by any one. I would like to demonstrate more clearly than has been done heretofore the fact that (1) correct inhaling, or, more properly, exhaling, (2) altitude above the sea level, (3) rightly directed gymnastic training, all work on the same principle of mechanical distension of the air cells. We have failed to recognize the mechanical conditions within the chest which govern respiration and blood circulation. The blood does not flow alone because the heart pumps it, but because the lung mechanism draws it in and forces it out again. Any system of training to be of use must depend upon the mechanical distension of the air cells. I wish to make my protest against the surgeon's hasty interference in operating upon anal fistula while tuberculosis is in the lungs; it may be considered a means of elimination, and unless such elimination is provided for, an operation should not be performed. If the disease is due to a special toxin working in the system, it must be only through the development in that system of the proper antitoxin, or the appropriation of it from outside the body, that the disease may be opposed. The opposers of antitoxin are inconsistent in that while they admit the existence of a toxin, they deny the possibility of an antitoxin. I firmly believe a considerable percentage of tuberculosis could be held in check, if not cured, if with the present advanced technic in the manufacture of the tuberculin preparations, the physicians using them had the required knowledge to determine what patients could be treated by this method and how far the treatment should be pushed. The serum treatment of tuberculosis is, as yet, a beautiful dream, which I hope may be realized. My conclusions are that combined methods are superior to any given branch of treatment; that seasonable change of residence to a well selected, high-altitude climate, with its possibilities of out-door life, is the best possible method for retarding the advance of consumption; that exercise is necessary to promote cell activity and distention of the cells; that it is a mistake to overwhelm the body with frequent injections of undetermined animal serums producing a cumulative toxæmia; that the key to the direct method of specific treatment comes through the skillful determination of the proportion of infection, the balance between vital resistance and the disease. —*The Charlotte Medical Journal*, July.

THE HUNTERIAN LECTURES ON SURGERY OF THE KIDNEY.

Henry Morris thus summarizes his lecture delivered at the Royal College of Surgeons of England on Renal Calculus: the Difficulties and Errors in Diagnosis in their Relation to Exploration of the Kidney; Unsuspected, Quiescent, and Migratory Calculi (*British Medical Journal*):

The conclusions at which I have arrived are the following:

1. That the aim of the surgical treatment of renal calculus should be to extend the application of nephrolithotomy, and thereby restrict the necessity of nephrotomy and nephrectomy.

2. That more frequently than not the failure to find a stone is not in reality a failure of treatment, because there are so many curable morbid conditions which mimic renal calculus, and which are discoverable only by exploration.

3. That the theory that a stone in one kidney, whether that kidney is itself painful or not, reflects or transmits pain to the opposite kidney is quite unproved; that it is a dangerous theory, calculated to lead to very erroneous practice; and that the surgical principle with regard to exploratory operations should be that with pain, paroxysmal or continuous, on one side only, the kidney on the painful side should be explored.

4. That nephrectomy for calculus conditions is not often called for, and should be done only in exceptional cases. Nephrotomy for calculus pyonephrosis is the proper operation, at any rate as a primary operation, because of the frequency of double calculus disease. Experience has shown that kidneys from which stones weighing eight hundred and thirty grains and one thousand three hundred grains have been removed are functionally sufficient to maintain life during the blocking of the ureter or suspended action of the kidneys of the opposite side.

5. That nephrectomy while the opposite organ is occupied by calculus is fraught with the greatest danger to life; whereas nephrectomy, after the opposite kidney has been freed of stone, will probably be followed by recovery from the operation and possibly very good health for many years afterward.

6. That when renal calculus causes reflected or transferred vesical or ovarian pain, the removal of the calculus will be followed by complete cure of the bladder or ovarian symptoms.

7. That in some cases renal calculus conditions are attended by very remarkable nervous symptoms, sometimes

with, sometimes without, high temperature, and that information as to the cause of these symptoms is needed.

8. That unsuspected renal calculi are a source of very real danger to their possessors; and when, whether by accident or by the systematic examination of the urine, we have cause to suspect the presence of a calculus, we should recommend its removal, regardless of the fact that it is not causing renal or transferred pain.

9. That quiescent calculus is as dangerous to the individual as unsuspected calculus, and ought to be removed by operation.

10. That the hitherto accepted teaching, that a renal calculus, if causing only mild symptoms, or attacks of severe colic of only recent occurrence, should be treated on the expectant plan, ought to be discarded as unsound in theory and dangerous in practice.

11. That the same principle should be applied to renal calculus which has long been the rule in regard to vesical calculus—namely, when suspected it should be searched for, when known to exist removed, without waiting in the hope that it may become encysted or spontaneously expelled.

12. That the very low mortality of nephrolithotomy puts this operation upon the same footing for renal calculus as lithotrity in the most experienced hands for vesical calculus. —*The Charlotte Medical Journal*, July.

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospital,

NOTES ON OPERATIVE WOUND INFECTION.

By FREDERICK LOUIS BRUSH, M. D,

House Surgeon New York Post-Graduate Medical School and Hospital.

"Our sutures must have been infected." The phrase, begun with antisepsis, has done baneful service all along the line of surgical progress, and is now often heard wherever surgery is practiced and operative wounds fail to unite properly. Let the burden be lifted from the shoulders of the much-abused catgut, and placed where it belongs. To determine the manner of wound infection in a given case is generally a difficult problem, but it is much simplified when we put aside two or three conceptions which have been doing duty too long. The following propositions will, perhaps, bring out the point aimed at.

1. The technique of aseptic surgery is thoroughly developed. Instruments, clothes, and so forth, can be and are, as a matter of fact, made sterile. Hands and the skin-field of operation are sometimes sterile—sometimes approximately so. Suture material, as used in the New York hospitals, is, with very rare exceptions, sterile.

2. The few pathogenic germs remaining in the skin after careful preparation will not cause suppuration, providing all else is well done. This is fairly well proven.

3. Infection is, then, the result of a blunder by someone.

4. The two chief factors in getting infection, under our present methods, are: first, a break in the aseptic chain during the operation, usually toward its close; and, second, the approximation of bruised and ill-nourished tissues, and the failure to obliterate spaces in the deeper parts.

Infected catgut? Yes, but infected when the finger-tip of an assistant was drawn along its length after touching the instrument from the operator's hand, that had been wiped on the front of the once-sterile coat, which had just come in contact with a soiled table-edge.

In regard to the second point, it may be said that the feeling of safety engendered by aseptic methods has undoubtedly led us to underrate, to a certain extent, the value of skillful mechanics in surgery, but one has only to note the fact that the surgeon who deals neatly and carefully with the tissues, and pays but small heed to asepsis, is getting better results than his brother of the rigid technique and the bruising hand. It is a question of giving the worst or the best chance to the few inevitable micro-organisms.

5. Hospital assistants, on the average, enter operative work with better prepared hands than the operator, and they preserve, on the average, a better cleanliness throughout. Yet they are expected to take the blame in nearly all cases of operative wound infection. This is, of course, of no moment personally, but of considerable importance to surgery, which can only be advanced on a basis of fact. "He was attending a pus case?" Yes. His work is a constant contact with surgical dirt, but tests have shown that his hands are, on the average, better prepared than are those of his chief. It is only a choice betwixt contact with suppurating wounds, chair backs, car straps and a dozen other articles—all about equal in hand-soiling qualities.

The theories of wound suppuration seem to be satisfactory; the practice of preventing it is becoming so. Much work is being done in a way that leaves little to be desired; but in many places it remains to give up a few old cherished ideas as dangerous, and to better recognize the two salient points above mentioned.—*The Post-Graduate*, Feb. '98.

A CONTRIBUTION TO THE TREATMENT OF GONORRHŒA.

By HERMANN GOLDENBERG, M.D.

N. Y. Medical Journal, Jan. 22, 1898.

In his introduction to the *Comments on Materia Medica, Pharmacy, and Therapeutics of the Year* 1896, Dr. Squibb remarks: "It is agreeable to report that in a general way the craze for novelties has somewhat subsided during the past year, although there are abundant evidences that the mill is still grinding, especially in that ever-fertile source of supply, Germany."

In the face of this statement it is with a feeling of hesitation and with a plea for excuse that I join the ranks of those who advocate a new drug. It is true that new remedies, having the indorsement of eminent authorities, are placed upon the market in such rapid succession that one has hardly time to become familiar with their use before a superior substitute is recommended. This probably is the cause of the indifference and skepticism displayed by many physicians as regards new remeties. Yet we are scarcely warranted in carrying our conservatism to such a point as to reject those new drugs whose chemical composition is such as to promise advantages over the older ones.

Whoever has to deal with gonorrhœa knows that, notwithstanding the multitude of remedies and methods at our command, but few of them come up to our expectations, and this, in my opinion, applies even to the much-lauded Janet's method. I had practiced the early irrigation treatment with permanganate of potassium long before Janet published his first paper, and have advocated it under proper restrictions without, however, being carried away in my enthusiasm, as some of my colleagues have who make use of every opportunity to proclaim this method as the ideal one in every case and in every stage of gonorrhœa. Although it is true that this procedure gives good results if the patient presents himself at the very earliest stage of gonorrhœa, it is contraindicated when the inflammatory symptoms are pronounced. In this connection I would remark that complicated appliances are unnecessary in practicing this method. For irrigation of the anterior urethra an ordinary irrigator, placed at a proper height and provided with a glass tip will answer the purpose, while for flushing the posterior portion of the canal a large hand syringe, holding about five ounces, with a porcelain or glass tip which fits sufficiently tightly to close up the meatus is to be preferred. In this way we overcome the resistance of the cut-off muscle with greater ease than with the Janet method; the pressure can be re-

gulated according to the degree of muscular resistance and the sensitiveness of the patient.

While the Janet method, therefore, has a certain field of usefulness, particularly in hospital practice, its disadvantages in private practice are sufficiently manifest to preclude its general employment, as even in those cases where it is applicable few patients are willing to spend the necessary time and money.

For this reason any kind of treatment which the patient is able to carry out himself will always enjoy the greatest popularity, and it must be our aim to prescribe such remedies as, when properly used, will destroy the gonococcus without injury to the urethral mucous membrane.

We are indebted to Neisser for the introduction of the nitrate of silver for this purpose, which for a long time has been a favorite means for the destruction of the gonococcus. As the effect of this drug is only superficial, owing to its forming insoluble combinations with albuminous substances, and as the gonococcus penetrates at an early period into the deeper layers of the epithelium—and even into the connective tissue—the physician has long been desirous of obtaining a silver compound which would not form insoluble, and consequently inert, albuminates.

Recognizing this want, synthetic chemists have endeavored to prepare silver compounds which would be free from this disadvantage, such as argentamine and argonin. Although it must be conceded that these preparations exhibit a more penetrating effect than nitrate of silver, and must be regarded as valuable acquisitions, I have, during the past few months, become familiar with a new silver salt which has proved even more effective. This remedy, known as protargol, is a light yellow powder, readily soluble in water, containing 8.3 per cent. silver in firm combination with a highly diffusible proteid base. Its solutions, which are clear and of neutral reaction, are not precipitated by alkalies, albumin or acids, and hence its effect is not interfered with or impaired by the presence of these substances. It is advisable to preserve the solutions in dark bottles. Owing to its chemical constitution, its combination with a highly diffusible base, there is reason to believe, *a priori*, that it exerts a more penetrating effect than any other compound yet brought before the profession.

Although since July I have had an opportunity of testing protargol in more than sixty cases in dispensary and private practice, I am well aware of the difficulty of presenting accurate statistics as regards the duration of the affection under its use, and of instituting comparisons with other anti-

gonorrhœal agents. Particularly with reference to the rapidity of the cure, I coincide with Neisser, who lays more stress upon the reliability of the remedy than upon the rapidity of its action. The period of experimentation and the quantity of clinical material are sufficient, however, to afford me a fair general estimate of the value of the new drug, which agrees in the main with that expressed by Neisser*—namely, that it surpasses all other agents hitherto in use for the treatment of gonorrhœa.

As to the mode of application, this will depend upon whether the inflammation is localized in the anterior urethra or has invaded the posterior portion of the canal. In the former case the patient is instructed to inject a one-per-cent. solution with an ordinary urethral syringe holding three drachms; this is retained for from ten to fifteen minutes, and the injection is repeated three times daily. In posterior urethritis the injections are made by me with a hand syringe having a capacity of five ounces of the kind already described, or with the Guyon instillator. The strength of the solutions for the posterior urethra has varied from one half to one per cent.

The treatment was found absolutely painless, and unattended with any evidences of local irritation or general disturbances. The injections were kept up, although less frequently, even after the disappearance of gonococci, until the urine became perfectly clear and free from filaments (*Tripperfaden*). Examinations for gonococci were made, after Gram's method, at intervals of a few days, and the permanence of the cure was tested by ordering the patient to drink a moderate amount of beer while still under treatment. In some cases, after the disappearance of the gonococci, a slight discharge persisted, which subsided under the conjoint use of astringent injections (Ultzmann's solution or ichthyol).

Besides its employment in injections, I have tried, as an abortive method in two acute cases, insufflations of the pure powder through an endoscopic tube introduced up to the cut-off muscle. The effect of this mode of application was satisfactory to a certain extent, as shown by the rapid disappearance of the gonococci and a cure within a few days. On the other hand, considerable irritation resulted from the introduction of the endoscopic tube, and until a more agreeable method of insufflation has been devised, we shall have to dispense with this mode of application in acute cases. That the irritation was not due to protargol, but to the instrumentation, was proved by the excellent results obtained with the pure pow-

* *Dermatologisches Centralblatl*, No. 1, 1 897.

der in four chronic cases of anterior urethritis, with gonococci, which had not been cured by previous topical treatment with nitrate of silver. Equally good results were obtained in some subacute and chronic cases, with gonococci, from the use of a ten per cent. protargol ointment (lanolin, 95 ; olive oil, 5), applied by means of a steel sound retained in the urethra for fifteen minutes. It is obvious that by this means of application the protargol is forced more thoroughly into the follicles and lacunæ, and remains in contact with the urethral mucoso for a longer period.

I intend to try gelatin urethral bougies of protargol as soon as I can have them made in the proper manner.

In conclusion, I can but confirm the statement of Neisser that no other remedy gives such uniformly good, reliable and quick results as have been witnessed from the use of protargol.

SURGICAL TREATMENT OF EPILEPSY.

A very interesting clinical contribution on the *Surgical Treatment of Epilepsy*, with a report of fourteen cases, is offered by Dr. Andrew J. McCosh, of New York, in the May number of the *American Journal of the Medical Sciences*. The writer unhesitatingly acknowledges the unreliability of statistics of cerebral operations, especially in connection with focal epilepsy ; and also admits that the hopes of several years ago in this field of surgery have not been fulfilled, which has led many good operators to desert the pursuit of cerebral surgery. And yet progress is being made—limitations are becoming understood and appreciated. This is pretty well shown in the deductions given by the above named writer :

" The experience of the last twenty years has taught the neurologist and the surgeon many useful lessons concerning the diagnosis of cerebral lesions, and the possibility of their relief by operation. While it cannot be claimed that great advances have been made in this branch of surgery, yet we are in a better position than formerly to determine in what cases operation should be advised. There are numerous reasons, however, why we cannot, with much confidence, promise that benefit will follow the operation. Prominent among these are the following :

1. Uncertainty in diagnosis. In the motor areas of the cortex the location, if not the character, of the lesion can be determined with reasonable certainty ; but the diagnosis of lesions in the frontal, occipital and deeper regions is still apt to be unreliable. Any one who has witnessed many

brain operations can testify as to the disappointment of the surgeon and, perhaps, the surprise of the neurologists when the suspected area of the brain contains no lesion visible, at least, to the naked eye. In the practice of most surgeons this has occurred so frequently that many of us feel very sceptical as to what will be found in any given case when the skull has been opened.

2. The inaccessibility of certain portions of the brain. While it is true that every point of the cortex can be reached, and that we can gain access to some of the deeper convolutions, yet certain portions of the brain must always remain inaccessible to the surgeon.

3. The character of the lesion. This may be such as to render its removal either impossible or inadvisable, as, for example, a disseminated malignant or even tubercular growth; or it may be of such an ill-defined character that with the naked eye it is impossible to distinguish diseased from healthy brain tissue. The change in the cells may be so slight that, after the removal of a portion of the cortex, even with the microscope it is difficult to affirm that the lesion was sufficient to produce the epileptic seizures; on the other hand, the fault may lie in an altered blood-supply rather than in cell degeneration.

4. The post-operative lesions. As the result of operation, a cicatrix may remain in the cerebral tissue, thickening of the membranes or adhesions between the pia and dura may result, or, finally, a depressed cicatrix may become adherent to the cortex, any of which lesions may continue to act as a source of cortical irritation. In recent years these post-operative lesions have been frequently advanced as reasons for the failure of cerebral operations. I think, however, that their importance has been exaggerated. I believe that in a few cases they may act as a strong irritant, especially when the cerebral tissue of that particular patient has become exceedingly sensitive, owing to long continued irritation. The theory, however, that such irritating cicatrices are of common occurrence seems to me to be somewhat invalidated by the fact that in recent traumatic cases extensive operations on skull, membranes, and even brain can be done almost with impunity as far as fear of future epilepsy is concerned. Most of us are familiar with the extensive lacerations and loss of cerebral tissue which occur as the result of injury, and yet, if the depressed bone is thoroughly removed, it is rare to see epileptic seizures follow as the result of the traumatism.

5. The damage which has already been done to the neighboring cerebral structures by the lesion for which the operation is performed. The gross lesion may be removed,

and yet, in cases where the irritation has persisted for years, the secondary damage is often irretrievable.

This same condition will also probably explain why excision of the irritated centre in the cortex will so often fail to cure the patient. The sclerosis which has extended from the diseased "centre" to neighboring convolutions will continue to act as a cortical irritant. It is true that a few brilliant cures have resulted after such incisions, and in cases of epilepsy which are distinctly focal it is a perfectly legitimate procedure to excise that portion of the cortex which, under electrical stimulation, is shown to be the centre for the affected muscles. Unfortunately, however, the majority of cases thus treated have not been cured. This may be due to the sclerosis established before the operation or to the post-operative cicatrix. If for a period of months after the operation there be a temporary cessation of the convulsions, the cicatrix rather than the sclerosis may be blamed."—*The Clinical Review*, June, '98.

AN OPERATION FOR SLIPPING PATELLA.

Dr. Whitman presented a boy 13 years old, on whom he had operated sixteen months ago for slipping of the right patella. The capsule had been divided on the outer side, and considerable difficulty had been found in reducing the dislocation on account of the contraction of the tissues. A tuck was taken in the capsule on the inner side. The patella was now over the external condyle. When he left the hospital it had been in the median line. For a time he had worn a knee cap as directed, which he had long ago discarded. This case was not presented as a fair test of the operation, as the dislocation was but part of the disability and deformity attending hemiplegic contraction of the right side of the body. It had, however, relieved pain and discomfort.

Dr. Gibney said that it was still a question what is the best treatment for slipping patella. He had transplanted a fragment of the tibia with the insertion of the ligamentum patella in a girl 14 years old. Union in the new position was secured, and the limb was put up in plaster-of-Paris. In spite of a little suppuration, the recovery was good. The ultimate result, however, was in doubt, as the patient was lost sight of.

In another young woman the slipping had occurred repeatedly, followed sometimes by acute inflammation. A splint had been applied, and she was wearing it still to keep the patella in place. In a boy of 4 years, the slipping patella had been easily reduced, and it is probable that massage and the growth and development of the muscular fibres will be sufficient to remove the trouble.—*New England Medical Monthly*, June, '98.

OPERATION FOR FISTULA.

(*Mathews' Med. Quarterly, October,* 1897.)

Henderson gives his plan for avoiding transverse section of the anal sphincters in operation for fistula. He makes a long incision in the line of the muscular fibres, and splits the muscle sufficiently to allow the fistula to be dissected out. In complicated cases with multiple fistula he cuts the sphincter attachments at the coccyx, thus giving room for getting behind the sphincter and dissecting out multiple fistula tracts without making trans-section of muscle.—*The Post-Graduate.*

TWO HUNDRED AND FIFTY BASSINI OPERATIONS FOR THE CURE OF INGUINAL HERNIA, WITHOUT MORTALITY.

By W. B. DE GARMO M.D. (*Jour. of Am. Med. Assoc., Oct.* 2, 1897.)

The author reports two hundred and fifty operations on two hundred and sixteen patients ; the operations having been carried out by the method of Bassini, except that kangaroo tendon was used for the deep sutures instead of silk. The youngest patient operated upon was five months old, and the oldest over eighty years. Ninety-three of the cases were scrotal hernia ; fifty-five were irreducible ; seventeen were in a state of strangulation at the time of the operation ; and in fifty-five cases it was necessary to exercise more or less omentum. The largest hernia operated upon was two feet in circumference, extending two-thirds of the distance to the knees, in a man fifty-three years old ; followed by prompt recovery, and, so far, eighteen months after the operation, permanent cure.

The success of the Bassini operation is believed due to the removal of all abnormal structures from the canal and the bringing down of two muscular layers to form a new posterior wall. The contents of the canal, aside from the protrusion of the hernia, were found to have been an ovary in three instances, testicle in nine, and enlarged veins in a number of males, and enlarged veins, resembling a varicocele, in one female. Bunches of extra-peritoneal fat are frequently met with. Numerous cysts were found, some connected with the cord and others not.

Two hundred and seven of the cases healed by primary union, and, of the fifty-five operations on children under fourteen years of age, there was only one failure to obtain primary union.

Six of the total number of cases had recurred, and three of the recurrences had been reoperated upon, with apparent success, leaving three actual recurrences. The history of the six failures are reported, and, in every instance, the cause of the failure is indicated by the case of history.—*The Post-Graduate,* Jan. '98.

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Editorial.

CARDIO-PULMONARY MURMURS.

The recognition of the true import of murmurs heard over the heart is of great moment to the patient, whether from the possible results and prognosis in regard to personal suffering or longevity, or in regard to his eligibility for life insurance. The various organic murmurs when carefully studied can ordinarily be readily made out and distinguished from those which are classified as functional; the danger is rather in mistaking one of the latter for the result of structural changes. Still greater care is required in discriminating between the different varieties of functional murmurs. Hæmic murmurs occurring in the course of anæmia are usually recognized by their soft character and low pitch and confined to the cardiac area, are louder in the recumbent and at the end of inspiration or beginning of expiration; they occur with the heart's systole and are associated with the other vascular murmurs of anæmia. The cardio-vascular are heard most distinctly at the fourth left interspace and louder in the upright position, loudest also at the end of expiration but ceases then. Any excitement of the heart increases it, and it ceases if the patient lies on his side. In regard to the third group, the cardio-pulmonary, our views have been considerably extended by the recent light thrown upon the subject mostly

by Potain and his pupils. Dr. C. F. Hoover, of Cleveland, Ohio, in a paper in the *New York Medical Journal*, Aug. 6th, 1898, gives us a resumé of the latest observations on this subject. He first reviews the history of the subject. Laennec did not explain the occurrence of these functional murmurs. Cases are mentioned by Wintrich in 1854, B. W. Richardson in 1860, Skoda in 1863, Choyan in 1869, Weiss in 1880. The controversy between Austin Flint and G. Balfour is referred to. Flint's presystolic murmur without disease of valves Hoover thinks were cardio-pulmonary.

The most common location, he states, of the cardio-pulmonary murmur is over that portion of the præcordial area which enjoys the greatest degree of antero-posterior excursion during the cardiac systole. This point is over the conus arteriosus, or the pulmonary area. He points out the insufficiency of Naunyn's and Balfour's claims, that these murmurs are due to actual regurgitation owing to relative insufficiency of the mitral valve. Functional pulmonic murmurs heard over the pulmonary area, in chlorosis and anæmia, he argues, by exclusion are mostly cardio-pulmonary. If it was hæmic it should be heard loudest over the aortic area, as the pressure is four to six times greater there. In regard to the interpretation of the cardiac activity as seen and felt over the chest wall, and to define the relation of the various phases of cardiac cycle to the phases of cardiac excursion, he states:—

"A great source of error in timing murmurs over the heart is due to a misinterpretation of the cardiac impulse. The interpretation of the impulse, as described by Vaquez, is the one that is most acceptable to my mind. The palpable apex impulse is divided into two phases:—First, a progressive elevation; secondly, an instantaneous impulse. The auricle contracts, filling the ventricle until tension on the ventricular wall announces the commencement of the ventricular systole, at which instant the auricular systole ceases and the expulsion begins, the auriculo-ventricular valves being closed. This closure is responsible for the sharply defined impact which terminates the systolic impulse of the ventricle. Over the apical region the impulse does not sustain a constant relation to the cardiac cycle. The time of

the impulse depends largely upon the conformation of the thorax and the relative position of the heart in the mediastinum. Sometimes the intercostal space is protruded by the apex; sometimes the impulse disappears, giving what Marey called a 'negative impulse.' This paradoxical term was selected by Marey to describe the simultaneous recession and hardening of the apex during the systole. The closure of the mitral valve may follow the commencement of the systolic impulse, may precede the palpable impulse, or may be synchronous with it.

"The more accessible the heart and the larger the præcordial area of activity the more readily can we identify the phases of the impulse with the phases of the cardiac cycle. It is a common clinical practice to estimate the beginning of the cardiac systole with the beginning of the impulse. For this reason the pulse of aortic insufficiency and the pulse of mitral stenosis are described as being delayed. The delay is only apparent. The first portion of the cardiac impulse in both instances is diastolic. The estimated lapse of time between the closure of the mitral valve and the carotid pulse in cases of mitral stenosis and aortic insufficiency is found to be what it normally is—viz., about twelve one-hundredths of a second. In the London *Lancet* of 1887 Dickenson speaks of the 'error' of calling the so-called 'murmur of mitral stenosis a presystolic murmur, when it is really a murmur of insufficiency.' The error is Dickinson's, because he failed to recognize the auricular element in the elevation of the ventricle.

"In making a clinical examination of the heart, what we really palpate and inspect is not the apex impulse alone, but the increase in the antero-posterior diameter of the heart. The apex impulse is merely incidental to this anterior heaving of the heart. The term apex has come into common use because that portion of the heart is most commonly accessible to view and to touch. When the heart is dilated or the lungs are retracted we say the apex impulse becomes broadened. What really occurs is the increase in the antero-posterior diameter of the heart becomes accessible over a larger portion of the ventricles. As I have remarked above, this increase in the antero-posterior diameter of the heart

may be partly produced by the systole of the auricle and is not occupied entirely by the ventricular systole. The beginning of the ventricular systole is marked by the closure of the atrio-ventricular valves. Observers differ widely upon what point in the cardiac elevation the closure of the valves occurs."

A cut is given showing the points in the cardiographic tracing where various observers have placed the closure of the mitral valves. It is marked at the beginning of the elevation by P. Hilbert, at little above this by Martius, in the middle by Landois and at the top by Marey. The latter is accepted by Potain. Roy and Adami accept the point of Martius, but Dr. Hoover thinks that as the latter's tracings were taken from the exposed hearts of animals and with considerable pressure on the heart wall, and the negative tension in the normal state was removed, all lessened the effect of the auricular systole upon their tracings.

The gallop rhythm is not due, he thinks, to interruptions of the cardiac impulse such as might be produced by contraction of the papillary muscle but by the force of the auricular systole. A common observation is the transition from a presystolic cardio-pulmonary murmur to a gallop rhythm.

Cardio-pulmonary murmurs from their chronicity are presystolic, mesosystolic, telesystolic, diastolic and telediastolic.

"The murmur may be produced either by compressing the lung between the heart and the thoracic wall during any portion of the cardiac impulse, or by aspirating a portion of the lung lying in contact with the heart when the heart in any portion of its cycle recedes from the contiguous lung. When the cardio-pulmonary murmur is due to compression of the lung, it may have either a soft, blowing, or a vibratory character. The latter is the more common. When the murmur is due to aspiration, as is always the case when the murmur occurs during the diastolic phase, it has the soft, blowing character."

The cardio-pulmonary murmur may be palpable as a thrill which appears very superficial. They are heard only on a sharply defined area, are not transmitted, and do not

gradually fade in intensity as endocardial murmurs do ; they may disappear under a forced inspiration or expiration, may disappear in the horizontal position, or appear then only.

As a certain thickness of lung is necessary to produce the murmur, it is influenced by the condition of the heart in regard to its size and position. The systolic murmur is usually vibratory, which if it were produced at pulmonic orifice would be unlikely. The disastolic is blowing in character, caused, he thinks, by the aspirations into the infundibula from the bronchi in the latter case, and air being suddenly pressed into the bronchi in the other.

The presystolic murmur is the most misleading, but is distinguished from mitral stenosis by the fact that it disappears on forced expiration, absence of hypertrophy and dilatation of left ventricle and other conditions not consistent with mitral stenosis.

The systolic murmur is heard commonly at the portion of the præcordial area which undergoes the greatest excursion, over the conus arteriosus dexter and mesocardium of right ventricle, sometimes over the apex or other portions of the right ventricle; it is soft and blowing, or sawing. It may appear and disappear during inspiration or expiration or by changes in the position of the body. When it does not disappear under these conditions, to distinguish it from a relative insufficiency it must be very superficial in character if signs of myocardial insufficiency are present, but if none of the latter exists, and no disturbance of the circulation between the right and left hearts, he thinks the murmur is cardio-pulmonary in origin.

The telesystolic murmur occurs after the systolic valve closure and before the the diastole. He explains its production as follows:

"After the closure of the atrio-ventricular valves the systole of the ventricle continues producing the oscillations in the aorta and in the heart tracings which are interpreted as records of the papillary muscle contraction and the outflow remainder waves. During this silent portion of the ventricular systole a piece of lung is compressed between the chest wall and the ventricle, thus producing the faint super-

ficial sound, audible over a small, sharply circumscribed area, which in my experience has always been the apex area."

The diastolic cardio-pulmonary murmur may occur associated with a systolic, and heard over the apex or over second interspace to the right of the sternum. There will be absence of any pulse signs peculiar to aortic insufficiency, and it may not be possible to make it disappear.

He gives a report of a case of telediastolic murmur over the pulmonary area associated with a soft systolic murmur over apex and over aortic area. Second sound clear. In the second left interspace was a loud superficial murmur post-diastolic, heard best, as all these murmurs are, with the ear direct on chest. Most of these disappear on forced expiration. In the horizontal position systolic over apex becomes louder, diastolic clear. Systolic and diastolic clear over pulmonary area and post-diastolic disappears.

The phenoma, he states in conclusion, are entirely independent of the respiratory act. "The essentials for the production of the sounds are: A certain volume of lung must be implicated. The lung must occupy such a position relative to the heart and chest wall that the heart will have complete mastery over its excursion. The relations may be such that the rapid excursion of the lung will occur during any portion of the cardiac cycle. The duration may be holosystolic (during the entire systole) or merosystolic (during a part of the systole). The merosystolic murmurs may be presystolic, mesosystolic, telesystolic. With reference to the diastole, the murmurs may be holodiastolic (occupying the entire diastolic phase) or merodiastolic (occupying part of the diastolic phase). The merodiastolic murmurs may be protodiastolic, mesodiastolic, telediastolic. The murmurs produced by compression of the lung are often vibratory in character. Those produced by aspiration are always softly blowing in character.

"It is not always possible to demonstrate the cardio-pulmonary murmur as such, when present, though it may be diagnosticated by exclusion. When a murmur is present and is not associated with any evidences of modification of the pulse wave, and when there is no enlargement of either side of the heart, or any disturbance of the circulatory equili-

brium between the pulmonary and aortic circulations, I believe that we are justified in interpreting the murmur as belonging to the cardio-pulmonary class."

These explanations of Potain and his followers give us a reasonable cause for so-called functional murmurs which we have not heretofore had, and may explain a large proportion of the cardio-hæmic as well as the cardio-vascular. It is important to remember that they are not always systolic in time as hitherto taught, and the fact that they are usually recovered from should make us careful in giving a prognosis in any case until we are satisfied that we have organic troubles present, or by exclusion can diagnose it as one of the cardio-pulmonary class, and therefore a more hopeful condition for the patient.

CONTRACT MEDICAL PRACTICE.

The only method that is at all likely to be successful in abating this prevalent evil is the passing of stringent prohibitory laws which will be applicable to every practitioner in the country. Undoubtedly, many hold the position of lodge physician simply as a matter of self-preservation ; for were he to drop the appointment through a conviction that it would be to the general interests of the profession, if some *confrere* is at hand ready to accept it, the net result is a personal loss. We are pleased to see the radical manner in which the Connecticut State Medical Society has dealt with this question. At the meeting at New Haven, May 26th, 1898, the following resolutions were passed :—

"*Resolved*, That the Connecticut Medical Society declares it to be derogatory to the dignity of its members to render professional services at a stipulated fee *per cdpita* per annum, to the members of any lodge, society, association, or organization, or to enter into any contract for such services with any lodge, society or organization, provided that professional services rendered any hospital, dispensary, orphan asylum, town poor, or other public charity, shall not be prohibited by this act.

"*Resolved*, That any member of this society violating the above resolution is guilty of a breach of professional etiquette, and is subject to the rules and regulations governing the same."

Personal.

Dr. Denny (Bishop's 1894) is located in Shediac, N.B.

Dr. Vidal (Bishop's 1890) of Belt, Montana, paid a visit to Montreal in May last.

Dr. Roddick, Professor of Surgery in McGill, has returned from his European trip.

Dr. Philippe Dubé (M. D., Bishop's 1880) is practicing at St. Sylvestre, Lotbiniere Co., P. Q.

Surgeon Col. Neilson, R. C. A., has been appointed director-general of the Militia Medical staff.

Dr. D. A. Hart (M. D., Bishop's 1874) has removed from St. Lamberts to Montreal, where he will continue to practice his profession.

Dr. Longeway (Bishop's 1886), of Great Falls, Montana, made a short stay in Montreal in May last, while *en route* to visit his friends in the Eastern Townships.

Dr. C. Marshall (Bishop's 1876) of Huntingdon, Q., was selected to represent the Huntingdon District on the new Board of the College of Physicians and Surgeons, elected on the 13th July last.

Dr. M. Goltman (Bishop's 1892) located in Memphis, Tenn., has been appointed surgeon to the Shelby County Poor and Insane Asylum. He is one of the editors of the *Southern Lancet.*

Dr. (Miss) Maude Abbott (M. D., Bishop's 1894) has, after a sojourn of about three years at the Continental and British Medical centers, returned to Montreal and entered upon the practice of her profession.

Dr. Natrass, Surgeon No. 2 Regimental Depot, and Dr. Belton, Surgeon No. 1 Regimental Depot, R. R. C. I., and Dr. Birkett, Surgeon Victoria Rifles, have left for a course of instruction at Aldershot and Netley.

Dr. Montgomery (M. D., Bishops 1894) has been appointed surgeon to the Pulp Company at Grand Mère, Que. It employs several hundred men, and so rapidly is the industry increasing that this number will be considerably increased in the near future.

The students of Bishop's College Faculty of Medicine will learn with very deep regret of the death of one of their number, Mr. Joseph Barsalou,, of St. Johns, Que., a fourth year student. He died in June last of phthisis. We extend our deep sympathy to his sorrowing parents.

Dr. Casey A. Wood (M. D., Bishop's 1877) was, at the annual meeting of the American Medical Association held recently at Denver, Colorado, elected chairman of the Ophthalmological section, with Dr. Williams, of Boston, as secretary. The meeting for 1899 will be held at Columbus, Ohio. The attendance at the Denver meeting was very large, fully 2,000 members being present.

Surgeon Lieut.-Col. F. W. Campbell, Royal Reg. Canadian Infantry, Dean of Bishop's College Faculty of Medicine, was principal medical officer of the Brigade Camp of the 6th Military District at St. Johns in June last, and of the Brigade Camp of the 5th Military District held at Laprairie in July last. He has also been appointed medical examiner for candidates for the Royal Military College, Kingston, in the 5th and 6th Military Districts.

Dr. Lapthorn Smith, who has been absent in Europe for the last three months, has returned to Montreal and reopened his private hospital. He will also resume his service at the Samaritan and Western Hospitals, and at the Montreal Dispensary. Following the example of the European gynæcologists, and at the request of several practitioners of Montreal, he will begin a series of private courses lasting a month each, for physicians only, during which especial attention will be devoted to diagnosing abdominal and pelvic diseases.

Book Reviews.

The International Medical Annual and Practitioner's Index. A work of reference for medical practitioners. 1898, 16th year. E. B. Treat & Co., 241 West 23rd street, New York; Chicago, 199 Clark street. Price, $3.00.

The following physicians are the contributors to the volume: Herbert W. Allingham, F.R.C.S., Fletcher Beach, M.B., F.R.C.P., James Cantlie, M.A., F.R.C.S., Prof. H. D. Chapin, M.A., M.D., J. E. Cooney, L R.C.P., D.P.H., T. D. Crothers, M.D., E. Harry Fenwick, F.R.C.S., W. Soltan Fenwick, M.D., F.R.C.P., T. Calcott Fox, B.A., F.R.C.P., J. Dundas Grant, M.A., M.D., F. de Haviland Hale, M.D., F.R.C.P., Prof. G. M. Hammond, A.M., M.D., Henry Handford, M.D., M.R.C.P., David Hardie, M.D., Irvine S. Hagues, Ph. B., M.D., Robert Jones, F.R.C.S., Richard Lake,

F.R.C.S., Priestly Leech, M.D., F.R.C.S., Prof. W. Oliver Moore, M.D., Thomas More Madden, M.D., A. Mitra, L.R.C.P., L.R.C.S., Geo. Lane Mellins, M.A., M.D., Wm. Murrell, M.D., F.R.C.P., Prof. Theophilus Parvin, M.D., Jos. Priestly, B.A., M.D., D.P.H., Prof. A. W. Mayo Robson, F.R.C.S., A. D. Rockwell, A.M., M.D., Prof. Robert Saunby, M.D., F.R.C.P., Samuel G. Shattock, F.R.C.S., James Shaw, M.D., Prof. W. Gilman Thompson, M.D., Charles E. Todd, M.D., A. H. Tubby, M.S., M.B., Chas. Lloyd Tuckey, M.D., S. Watson Williams, M.D., M.R.C.S.

This annual is a book of over 600 pages, its *résumé* covering the different departments of medicine and surgery, chiefly from a therapeutic point of view. It is growing in the appreciation of the profession, last year's sales being noted for the largest in its history. The above list of eminent contributors is a guarantee for the thoroughness and character of the material collaborated. Besides being a culling of the wheat from the chaff of literature, a number of original articles appear, bringing important subjects up to date. Part I. considers all new remedies, the various new drugs, their character, action and uses, including also reference to the progress in electrotherapeutics and in hypnotism and suggestion.

Part II., which occupies the greater part of the book, discusses new treatment in medicine and surgery. The subjects are taken up alphabetically. An immense amount of information is condensed into these pages. One of the more important articles is that on congenital dislocation of the hip and its treatment, including a *résumé* of its pathology and symptoms. Skiagraphs and a number of wood cuts illustrate its pathology and the most recent methods of treatment. A number of excellent photogravures illustrate recent methods of treating Potts' disease. An atlas of the bacteria pathogenic in the human subject, by Samuel G. Shattock, M.D., is of great interest. It will be completed in two parts, the other half appearing in next year's annual. The text describes the methods of investigating these organisms, and a series of beautiful plates in colors clearly portray the characters of these micro-organisms. Articles appear on sanitary science, with inventions, and at the end of the book is a list of the new books published during the year. This annual is compact, well printed and bound, and teems with the latest points in medical progress, and the moderate price at which it is sold, considering the quantity of matter it contains, are all elements tending to make this one of the most popular of year books.

The Nervous System and its Diseases. A Practical Treatise on Neurology for the Use of Physicians and Students. By Charles K. Mills, M.D., Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania ; Clinical Professor of Neurology in the Woman's Medical College of Pennsylvania ; Professor of Diseases of the Nervous System in the Philadelphia Polyclinic ; Neurologist to the Philadelphia Hospital, etc. Diseases of the brain and cranial nerves, with a general introduction on the study and treatment of nervous diseases, with four hundred and fifty-nine illustrations. J. B. Lippincott Company,

Philadelphia. London, 6 Henrietta st., Covent Gardens. 1898. Dominion Agent, Charles Roberts, 593 Cadieux st., Montreal.

In medicine neurology has probably received more special attention in the way of monographs and text-books than any other department, and the subject has now grown to be one of considerable proportions. The present volume, which represents only one-half the subject, is a work as large as most of the text-books on the practice of medicine. The recent histological methods have given a more correct view of the construction of the nervous system, and it is only by getting at the fundamental principles and true conceptions of its structures that mooted points can be properly solved and much of the written matter hitherto accepted removed from the domain of speculation and theory and reduced to truthful demonstration. Hence the localization and correct knowledge of tracts and the physiology of the nervous system has made its study now more of an exact science, and may come within the comprehension of the general reader. In this work of Dr. Mills we have what may be looked upon as a new and extended edition of Dr. Gower's comprehensive and classical work. The book consists of two chapters. In the first is given nine sketches of the nervous system, its development, general anatomy, physiology and chemistry. In the second general pathology and etiology, symptomatology and methods of investigation, electro-physics and electro-medical apparatus, electro-diagnosis and electro-prognosis, electro-therapeutics, static electricity, general therapeutics and formulas. A few paragraphs are given on nomenclature and terminology. He endeavours to follow the suggestions of Prof. Burt G. Wilder, of Cornell University, namely, the use of appropriate and of possible pre-existing mononyms for all parts, and the employment, not of heteronyms, but of paronyms, of these Latin terms. He advocates that as far as possible for each part of the central nervous system there be found a name consisting of a single Latin word; that for each such Latin name there be found an English equivalent, not a translation but a paronym, a word having the same derivation and the same sound, but spelling and meaning may be different. As an example, aqueduct for the e tertio ad quartam ventriculum; porta the faramin of Monro; posteribrum the posterior perforated space. A table is given of a number of mononyms or single word terms; the advantages of such a change is quite evident. A table is given also of synonyms of gyres or convolutions and lobules. In regard to positions and relations of parts, such terms as cephalic, caudal, dural, ventral, dextral and sinistral are to be used instead of superior, inferior, posterior, etc. Wilder's table is given of a provisional classification of encephalic parts, according to segments, relations to cavities. Symptomatology and methods of investigation are gone into in detail, and the directions given are so clear and full that the tyro in nervous diseases can be fully initiated into the various methods of eliciting the evidences of derangement. The descriptive text is amply supplemented by cuts which demonstrate the methods adopted. Thus a cut shows the methods of using Bruce's medico-facial goniometer; another shows the skull landmarks and their names; others illustrate cranio-metrical methods and outlines of various sizes and shapes of the head, sensory dis-

orders and their terminology, and the special method of studying cutaneous sensibility, visual and ocular disturbances and the other special senses. How to use the various dynamometers; The reflexes and how to examine them; Vaso-motor, trophic and secretory symptoms; Electro-physics and electro-medical apparatus are fully and lucidly discussed, and the diagnostic uses of electricity made clear; the methods in electro-therapeutics are also explained. In general therapeutics are discussed such remedies and means as hygiene, diet, climate, hydrotherapy, massage movement treatment, systematized active exercises, vibratory therapeutics, the Weir-Mitchell rest treatment, suspension treatment, psychic therapeutics, hypnotism, local remedies, cold and hot applications, the revulsion, lavage, thyreoid treatment, cerebrin and testicular therapy, serum and nuclein therapy, various medicinal remedies, their dosage and untoward effects. At the end of the section a large number of formulas of drugs, useful in neurological practice are given for their internal, external and hypodermatic administration, and a *résumé* of Corning's intramuscular injection and congelation of oils in the treatment of chronic local spasm called Elæomyenchysis.

The diseases of the brain, its membranes and nerves, are then taken up in the remaining two-thirds of the book, which has over one thousand pages. The articles we have examined give evidence of a thoroughly exhaustive treatment from all points of view. We miss nothing of importance which was extant in the books of less recent authors, and there is woven into the text the results of the most recent investigations, and there is here what is so very essential in the complicated and abstruse subject of neurology, frequent illustrations by wood cuts and photogravures. We are quite convinced that this work fully carries out the ambition of the author to produce one of similar proportions and rank to that of Gowers' with the most modern matter added.

Conservative Gynecology and Electro-Therapeutics. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. Third edition, revised, rewritten, and greatly enlarged. By G. Betton Massey, M.D., Physician to the Gynecic Department of Howard Hospital, Philadelphia; late Electro-Therapeutist to the Infirmary for Nervous Diseases, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, of the Société Francaise d'Électrotherapie, of the American Medical Association, etc. Illustrated with twelve full-page original chromo-lithographic plates in twelve colors, numerous full-page original half-tone plates of photographs taken from nature, and many other engravings in the text. Royal octavo. 400 pages. Extra Cloth, Beveled Edges, $3.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry st., Philadelphia; 117 W. Forty-Second st., New York City; 9 Lakeside Building, 218-220 S. Clark st., Chicago, Ill.

While this is the third edition of Dr. Massey's book, it is practically a first one, as the earlier editions were largely treatises on the use of electricity in fibroid tumors, while this includes a consideration of the medical and surgical diseases of women, with

special reference to the use of electricity in this treatment. The ground the book covers, he thinks, will be of more value to the average physician and his patient than books devoted to the details of operations, that, however necessary at times, are often only properly of service as last resorts, and are thus incapable of application except at hands that have had more than book training. The first chapters are devoted to a consideration of the nature of the affections of women and the methods of examination. Chapter IV. deals with the phenomena attending the transmission of galvanic currents through living organs, electrolysis is explained and the reason of the separation of the anions and canions given, and the possibilities and advantages of cataphoresis pointed out, also the bactericidal action of electricity and its alterative action. The typical methods of applying the electric currents in the diseases of women are then described, and photogravures made from photographs of a professional model illustrate the methods and show the various motor points. The various electrodes are shown, menstrual derangements and catarrhal affections of the utero tubal mucous tract and their consequences are described. Eight exquisitely colored plates illustrate various affections of the os and cervix. The chapter on fibroid tumors is the most extensive, and is very freely illustrated; the varieties of tumors are described and the methods of using electricity pointed out. A detailed table is given in an appendix containing the results of the treatment of eighty-six cases. It is shown that 85.33 per cent. of the cases were successes. Cuts showing the growths before treatment and the condition after are very gratifying and convincing, and clearly prove the advantages of the method in preference to the knife in suitable cases. What should be done in hysterics and hysteroid affections which are on the border line between gynæcology and neurology is pointed out.

He considers constitutional treatment desirable for most of the cases suitable for electro-therapeutics. The author's methods and results of mercuric cataphoresis as a cure for cancer forms a very interesting and important chapter. He shows that the active principle of sarcoma and carcinoma can be killed by cataphorically impregnating the tumor with nascent oxychloride of mercury, of sufficiently massive dose, while the cancer-holding tissues are not killed.

The cosmetic applications of electricity are described in chapter twenty-one.

In Part II. the rudiments of medical electricity are given, such as the physics of the galvanic or direct current; electro-motive force resistance, unity of current, freely illustrated, various kinds of batteries described and illustrated, and other electric apparatus, how to handle the galvanic current. The faradic and static currents are similarly treated. Chapter twenty-seven describes the sinusoidal current and its effects, and the next and last chapter electric light as an illuminant and as a therapeutic agent.

This in an exceedingly interesting book, and should be welcomed by physicians generally. Surgical methods have so monopolized the attention of the medical world of late that a therapeutic method so potent as is here pointed out should be eagerly studied and utilized to the advantage of both physician and patient.

Egbert's Hygiene and Sanitation.—A Manual of Hygiene and Sanitation. By Seneca Egbert, A.M., M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. In one handsome 12mo. volume of 360 pages with 63 engravings. Cloth, $2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The object of the author in this volume is to give in a compact form a plain statement of the fundamental principles and facts of hygiene and sanitation largely from an American point of view. He has given the results of his own observations, and consulted the more massive works and the recent literature of the subject, and reduced all to a convenient synopsis suitable for the busy general practitioner, the student and the lay reader.

In the introduction a cursory history of what has been done for public health in the past as far back as Hippocrates 400 B. C. is given.

The wonderful improvement in the death rate which has occurred in communities where the principles of modern hygiene are applied.

The reasons are pointed out why physicians should thoroughly comprehend everything pertaining to this science in all its branches, and most recent developments in regard to general and public sanitation, and more especially in regard to personal or domestic sanitation.

The more general adoption of courses of study on hygiene in schools and colleges is urged. Bacteriology is the heading of the first chapter; after the introduction, a brief review of this modern science is given. A knowledge of this subject is indispensable for a proper comprehension of most of the diseases humanity is liable to and for intelligently combatting their deleterious effects.

The atmosphere and water receive detailed consideration, and the subject matter is freely illustrated by wood cuts. The chapter on food gives a resumé of the physiology of the process of digestion, the value of the different classes of foods, special foods, stimulants and beverages. The fact that beef tea as ordinarily made has no nutritious value, is not food, simply acts as a stimulant to the vital and nervous functions. Very sensible directions are given for the use of alcohol, and its true usefulness pointed out.

In the chapter on personal hygiene, exercise, clothing, bathing and light are discussed. School hygiene, disinfections and quarantine are interesting chapters. The use of formaldehyde is described, and Koch's and Jasper's table of the comparative value of a number of disinfectants given.

The remaining chapters are on the disposal of sewage, vital statistics and the examination of air, water and food. This volume, while not entering deeply into many of the subjects, gives all the essentials from the most modern standpoint, and the interesting and clear manner in which it is written should commend it as a most desirable addition to the shelves of students, practitioners and all interested in the physical and mental welfare of the race.

Saunders' Medical Hand Atlases. Atlas of Legal Medicine.—By Dr. Von Hofman, Professor of Legal Medi-

cine and Director of the Medico-Legal Institute at Vienna. Authorized translation from the German. Edited by Frederick Peterson, M. D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic Nervous Department, College of Physicians and Surgeons New York. Assisted by Aloysius O. J. Kelly, M. D., Instructor in Physical Diagnosis, University of Pennsylvannia; Adjunct Professor of Pathology, Philadelphia Polyclinic, etc. 56 plates in colors, and 193 illustrations in black. Price $3.50 net. Philadelphia, W. B. Saunders, 925 Walnut st., 1898. Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

Atlas and Abstract of the Diseases of the Larynx. By Dr. L. Grunwald, of Munich. Authorized translation from the German. Edited by Charles P. Grayson, M. D., Lecturer on Laryngology and Rhinology in the University of Pennsylvania; Physician in Charge of the Throat and Nose Department Hospital of the University of Pennsylvania. With 107 colored figures on 44 plates. Price $2.50 net.

Atlas and Epitome of Operative Surgery. By Dr. Otto Zuckerkandl, Private docent in the University of Vienna. Authorized translation from the German. Edited by J. Chalmers Dacosta, M.D., Clinical Professor of Surgery in Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital, etc. With 24 colored plates and 217 illustrations in the text. Price $3.00 net.

Atlas of Syphilis and the Venereal Diseases, Including a Brief Treatise on the Pathology and Treatment. By Prof. Dr. Franz Mracek, of Vienna. Authorized translation from the German. Edited by L. Bolton Bangs, M.D., Consulting Surgeon to St. Luke's Hospital and the City Hospital of New York; late Professor of Genito-Urinary Surgery and Venereal Diseases, New York; Post Graduate Medical School and Hospital. With seventy-one colored plates. Price, $3.50 net. W. B. Saunders, publisher, Philadelphia, 925 Walnut street, 1898. J. A. Carveth & Co., Canadian agents, Toronto, Ont.

We have already referred to the first volume on internal medicine and clinical diagnosis, containing sixty-eight colored plates. Besides these five completed volumes, two others, one on diseases of the eye and one on skin diseases, are in course of preparation.

This series of hand atlases are authorized translations of Lehmann's medical land atlases, one of the most extensive and celebrated works of this kind. It has been translated into English, French, Italian, Prussian, Spanish, Danish, Swedish and Hungarian. The present English edition has been translated from the German by leading American specialists in each subject. The books measure 5½ in. by 7½ inches; are printed on good paper and strongly bound in green cloth. The plates appear on firm bristol board. The coloring is exceedingly well done, portraying the exact color of the tissues and parts as they appear at the examinations.

Each plate has accompanying it a detailed description of the conditions present. The volume on forensic medicine is one of the largest, and its photogravures and colored plates well executed, and will be invaluable to those called upon to give expert testimony as thoroughly trustworthy representations of conditions and appearances but seldom seen except by experts with extensive experience. Some of the illustrations, while true to the normal conditions, are ghastly in appearance, and the numerous representations of various forms of death, suicide and murder depict conditions only paralleled in a "Chamber of Horrors." In the volume on laryngology some one hundred pages are devoted to a *résumé* of the affections of the larynx.

The volume on surgery is largely a *résumé* on operative surgery. Clear descriptions of the various operations are given, and the more important ones illustrated. But most modern text-books contain the same amount and kind of information. The volume on syphilis gives a very thorough presentation of the multiple aspect of this affection, the numerous exquisite plates giving a realistic conception of the abnormal appearances. A summary description of the disease in its various stages is given at the end of the work and the methods of treating it. Very brief reference is given also to gonorrhœa and its treatment. These volumes will form a most useful addition to the medical library, and are equivalent to numerous clinical lectures and demonstrations, such as one would receive at a special practical course in any good hospital or post graduate clinic.

The price at which they are sold seems insignificant when compared with the amount of superior artistic demonstrations contained in each volume.

Cutaneous Medicine. A Systematic Treatise on the Diseases of the Skin. By Louis A. Duhring, M.D., Professor of diseases of the skin in the University of Pennsylvania. Author of A Practical Treatise on Diseases of the Skin, and Atlas of Skin Diseases. Part I.—Anatomy of the skin, physiology of the skin, general symptomatology, general etiology, general pathology, general diagnosis, general treatment, general prognosis. Part II.—Classification, anæmias, hyperaemias, inflammations. Both freely illustrated. J. B. Lippincott Company, Philadelphia ; London, 6 Henrietta St., Covent Garden, 1898; Dominion Agent, Charles Roberts, 593 Cadieux St., Montreal.

Dr. Duhring's work on diseases of the skin has been one of the standard authorities in this department of medicine. It was to be found on the shelves of every progressive practitioner, and was translated into French, Italian and Russian.

Like in other departments of medicine, after a few years most books become antiquated and must be replaced by those embodying all the recent advances. And such we have in the present edition.

In volume I general topics are discussed ; the descriptions and illustrations of the anatomy of the skin are excellent ; the numerous cuts are all exceedingly well executed, and give a clear idea of

every minute detail of the skin structure and of the hair and nails. Thoroughly practical are the general directions in regard to treatment and replete with all the most recent improvements. Under anæsthetics and analgeses, the recent intracutaneous methods of Schleich are given. Eucaine, however, which has distinct advantages over cocaine, is not mentioned.

All the various internal remedies are discussed in detail, and the use of the numerous local remedies pointed out. In volume II. skin diseases are placed in nine classes ; the anæmias, hyperæmias, inflammations, hæmorrhages, hypertrophies, atrophies, neoplasms, anomalies of secretion of the glands, and the neuroses ; this volume describes the first two groups and part of the third. Each affection is given an exhaustive treatment, as evidenced by the numerous foot notes denoting the source of information ; the more recent literature has been drawn upon in the construction of the truly classical text. The different varieties of each affection are well depicted in the very excellent photogravures which are freely distributed throughout the book. These will be of the greatest assistance towards making a diagnosis to those who may not be over familiar with the rarer and more doubtful forms occasionally met with in practice. This will undoubtedly be when completed the most thorough, practical and authoritative treatise on dermatology that has ever been published.

A System of Practical Medicine. By American authors. Edited by Alfred Lee Loomis, M.D., LL.D., late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College ; Physician to the Presbyterian and Bellevue Hospitals, New York. Volume IV. Diseases of the nervous system and mind, vaso-motor and trophic disorders, diseases of the muscles, osteomalacia, rachitis, rheumatism, arthritis, gout, lithæmia, obesity, scurvy, Addison's diseases. Illustrated. Lea Brothers & Co., New York and Philadelphia, 1898.

In this the fourth and concluding volume of the American System of Practical Medicine, we have some of the best known workers among American physicians. There are some twenty-four writers. Among them such names as Pearce Bailey, Charles L. Dana, F. X. Dercum, Landon Curtis Gray, C. A. Herter, A. Jacobi, Charles K. Mills, J. J. Putnam, M. Allen Starr and W. Gilman Thompson.

The volume is largely taken up with diseases of the nervous system.

Dr. F.G. Finley, of Montreal, contributes the section on diseases of the peripheral nerves, while the various affections are considered with unusual brevity for a system of medicine, yet the terseness is not associated with any incompleteness in the treatment.

The diagnosis and localization of spinal cord disease, by Dr. M. Allen Starr, is one worthy of the closest study, and contains the knowledge necessary for recognizing its various affections. Each symptom is considered which is present in disease of the cord. We notice the modern terms neuron and axon appear through the articles. Photogravures show the result of descending degeneration

in the motor tracts, and ascending degeneration, and the groups of cells in various segments of the cord. A table gives the muscles supplied from the group of cells in the various segments of the cord, another the localization of muscular reflex acts in the spinal cord, and another the localization of skin reflexes in the spinal cord. A diagram giving the distribution of the sensory neurons in the skin with the name of each nerve on the area, and a colored plate giving the areas of anæsthesia upon the body after lesions in the various sections of the cord will be helpful to the student. Also plate three, giving the cervical and sacral enlargements of the spinal cord in cross sections, showing the various neurons in the gray matters, the directions of the axons, and the varieties of fibres in the different columns of the cord in different colors. The traumatic neuroses are treated in a masterly manner by Morton Prince, M.D. The older idea that railway brain and spine was a distinct clinical affection is discarded, and is regarded as simply neurasthenia, hysteria and certain localized nervous affections when caused by an accident, and the affection follows psychical as well as physical shock. Trauma, he points out, acts either physically, psychically or physiologically. While he finds that a neurotic tendency exists in most of the cases, yet in this country in a considerable proportion of cases this heredity does not exist. The pains which are observed in these cases he thinks are largely of a psychical nature, due to the concentration of the mind on the part that was injured. A pain that has existed anywhere is felt after the exciting cause is removed, because the mind imagines the persistence of the diseased process. There is also, he believes, a natural tendency for any pain vibrations once started to continue for a long time as the result of a single excitation, as if there was an absence of an exhibitive influence, like the continuous vibration of a single pull of a string of a musical instrument. The author terms this "persistence of pain" or its revivification under the influence of attention *algogenesia.* Most of the articles in the affection of the brain cord and the functional nervous disorders are written by the men who are best qualified to do so in America, and we have as a result one of the best available expressions of the subject of neurology as it exists at the present time.

Mental diseases are included in the volume, each of the affections being written by well-known specialists. The articles on rheumatism, gonorrhœal arthritis, gout, obesity and scurvy are written by Dr. W. Gilman Thompson. This System of Medicine reflects in a thorough manner the present state of medicine, sifted carefully by the most able specialists from recent literature, and vivified by their personal experience and observation. We have a practical guide to the specialist and general practitioner, and a lasting monument to the literature of the continent, carved by the most illustrious of our many able workers.

The typography and binding are excellent and a credit to the publishers, Messrs. Lea Brothers & Co., who have placed before the profession of late so many useful and estimable works.

A Manual of Modern Surgery, General and Operative. By John Chalmers DaCosta, M.D. Cloth, $4.00;

half morocco, $5.00. Publisher, W. B. Saunders, Philadelphia.

This, the second edition, is somewhat larger than the first, containing 881 pages with 386 illustrations. The work is a credit to the author and publisher in every way. Much of the text has been rewritten, and all of it thoroughly revised from the first edition without altering its scope, which was that of a work to stand between the text-book and the compend.

Among the changes made in this edition are the addition of articles on the use of the Röntgen Rays, electrical injuries, wounds inflicted by modern projectiles, and sections on the surgery of the spleen, pancreas, liver, gall, bladder, female breast, etc.

There are many other points of addition and improvement too numerous to mention, which go to complete a most admirable manual for the busy practitioner and the student.

The sections on fractures and dislocations is well illustrated and very complete, yet terse and to the point. The tone of the work throughout is simply descriptive and fact-stating without that tedious element of theory discussing so prominent in some larger works. These considerations indicate the boon to students which the work so plainly shows itself to be.

International Clinics. A quarterly of clinical lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on treatment and drugs by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis, University of Pennsylvania, etc.; J. Mitchell Bruce, M. D., F. R. C. P., London, Eng.; and David W. Finlay, M. D., F. R. C. P., Aberdeen, Scotland. Volume II, eighth series, 1898. J. B. Lippincott Co., Philadelphia; Charles Roberts, 597 Cadieux st, Montreal, Dominion agent.

There are thirty-six clinical lectures in this volume, illustrated by some fifty-seven plates and cuts. Many of these are of great interest. The Treatment of Functional and Lateral Curvatures by Light Gymnastic Exercises, by James K. Young, M. D., is valuable. Besides detailed directions of the exercises, a number of photogravures from a model illustrates the various movements. The Etiology and Classification of Cystitis, by N. Senn, M.D., Ph.D., LL.D., is a lengthy and exhaustive paper on the subject. Among the most interesting are: The Treatment of Acute Failure in Chronic Heart Disease, by Alexander McPheran, M. D.; The Operative Treatment of Sclerotic Catarrh of the Middle Ear, by Seth Scott Bishop, B. S., M. D., LL.D; Some Forms of Gastralgia, by Prof. C. A. Ewald; On the Relation between Heart Disease, Pregnancy and Confinement, by A. Pinald, M. D.; Sprue its Cause, Signs and Symptoms, Pathology, and Treatment, by James Cantlie, M. D., F. R. C. S; Atonic and Nervous Dyspepsia and its Treatment by Intragastric Electrization, by A. D. Rockwell, M. D.;

Toxic Polyneuritis, by Professor R. Von Jaksch; The X-rays in Surgery, by James Mackenzie Davidson, M. B. C. M.; Cirrhosis of the Liver, by W. Hale White, M. D.; Sterility, by H. C. Coe, M. D.; Cataract Operations; Mules' Operations illustrated by skiagraphs; Capsulotomy; Operation for Pterygium, by L. Webster Fox, A. M., M. D.; Baldness, its Varieties, Causes and Treatment, by Jay F. Schamberg, A. B., M. D. Among practitioners away from centres of clinical teaching these volumes become a perennial source of clinical information, and touching every branch of medicine the subscriber to these series of volumes may keep thoroughly abreast of the progress being made in each department. The present volume is a particularly valuable one from the standing of the writers and the practical character of the treatment of the subjects under consideration.

Electricity in Diseases of Nose, Throat and Ear. By Scheppegrel. G. P. Putnam's & Sons, publishers, New York.

The author having in view the systematizing of this subject has collected the more valuable parts of many publications on the application of the potent energy of electricity to rhinology, laryngology and otology, forming an erudite compendium very appreciable to the worker along the line of study. The personal experience of the author, well recognized as extensive, is added, with deductions and statistics which are calculated to aid the student or practitioner. Chapters one to five contain so much bearing on general principles, means of generating current, arrangement of cells, etc., that to the man already familiar, more or less, with the subject, a greater condensation might be regarded as desirable. Chapter seven begins the more practical portion of the work bearing on examinations by the different methods of direct laryngoscopy, transillumination, etc., also the work of the electric cautery, electrolysis, etc., ending at the eighteenth chapter with massage by the aid of electro-magnetic appliances, after which the various diseases incident to this portion of the human economy are detailed in extenso and the advantages of electricity elaborated. Finally, the utility of the X-rays is demonstrated and its value shown here as well as in general surgery.

The entire volume abounds with eminently practical suggestions, most of which although familiar to the laryngologist brings before the general practitioner a *résumé* of up-to-date work in this line of more than ordinary merit

Dudley's Gynecology.—A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Chicago Medical College, Chicago In one very handsome octavo volume of 632 pages with 422 engravings, of which 47 are in colors and two colored plates. Just ready. Cloth, $5.00 net; leather, $6.00.

In no department of Medicine are the writers so numerous as in gynecology. The present volume is the latest addition to the many available ones now published. Dr. Dudley has endeavored to produce a practical treatise for the use of practitioners and stu-

dents. He adopts a pathological classification, preserving the anatomy of each pathological process by treating the subject under five heads :—I. General Principles ; II. Inflammation ; III. Tumors, Malformation and Tubal Pregnancy · IV. Traumatism and Displacements and Pelvic Massage. The subjects are also taken up in the order of etiological sequence as far as possible. This is certainly more simple and comprehensive than studying all the affections of an organ or region together, and to the reader well versed in pathology the study of the affections of the female generative organs is much simplified and more readily grasped. Thus under the head of tumors, all the growths of the vulva and vagina are first taken up, then those of the ulna and then those of the ovary and parovarian cysts. Under the head of inflammation a similar order is followed. In the first discussion of an organ its anatomy is described. In the matter of diagnosis and differential diagnosis very great care is given to the details, and numerous tables are given containing the distinctive features and emphasizing the differential points. Such tabular statements as are given in regard to the distinction between oöpharotic, paroôpharotic and parovarian cysts, the differentiation of ovarian cysts from other conditions which may be mistaken for them, differential diagnosis of normal gestations and ovarian cysts and between uterine myoma and ovarian cystoma are examples of these useful tables. While the text is full and includes descriptions of the subjects brought up to the latest accepted views, the book is unusually well illustrated, and mostly original cuts and plates are seen, and two out of three pages have some form of illustration. Color is freely used in them, which in most cases enhances the value of the figures in demonstrating the various abnormal conditions. The student can almost educate himself in the various operative measures, so clearly is the technique shown in the illustrations.

Among the many new cuts are a series showing the methods of massage as applied to the pelvic organs, the various manifestations can be readily learned from these illustrations. The book is a thorough reflection of the accepted views of surgical gynecology at this date, is free from padding and repetitions, and written in a style well adapted for conveying instruction to the student and general practitioner on account of the 'plentiful headings,' tabular style of presenting facts, its differential diagnosis tables and numerous illustrations.

PUBLISHERS DEPARTMENT.

GOVERNOR OGILVIE'S OUTFIT.

The newly appointed governor of the Yukon, Mr. Ogilvie, who will shortly leave for Dawson City to assume his duties, is now busy equipping himself for the rigors of that extremely cold climate. In the place of blankets he and his party are taking eiderdown sleeping bags and eiderdown quilts made of strong canvas on the outside and lined with a pure natural wool. By an ingenious device the down interlinings are arranged in such a way that when the bag is in use every seam is protected by a layer of down, either inside or outside; and therefore provides absolute immunity from even the lowest temperature. The bag is waterproof and windproof, and its weight is about that of two pair of blankets.

(Weight is an item of considerable importance in an arctic outfit.) The bags and the quilts are made by the Alaska Feather and Down Co., the well-known makers of high class bedding and down goods in Montreal.

SANMETTO, LISTERINE AND CHLOROFORM.

Three great blessings to suffering humanity. Sanmetto and Listerine being as great as Chloroform.

H. DRENNAN, M.D.

VERDERY, S. C.

SANMETTO IN URETHRAL AND BLADDER DISEASE—IN PRE-SENILITY AND ENLARGED PROSTATE.

In nearly thirty years practice I have never written to the proprietors of any medicine extolling its virtues, but after some years constant use of Sanmetto I can but say it is my sheet anchor in all urethral and bladder diseases. In pre-senility it has no equal. Have recently used it in two cases of enlarged prostate, with marked benefit in both cases.

GEORGE E. GILPIN, M. D.

BERKELEY SPRINGS, W. VA.

SANMETTO.

I have been using Sanmetto for the past three years in my practice. Have prescribed it in chronic cases of irritable bladder, urethral canal, irritable and enlarged prostate gland, sexual perversion, dropsy and cystitis. I have found, and know it to be an excellent remedy for all the above-named diseases. I am more than much pleased with Sanmetto. Every physician should be made acquainted with Sanmetto.

J. P. HAWKINS, M. D.

AVONDALE, ALA.

Appletons' Popular Science Monthly for September will contain a sketch of Charles Goodyear, the discoverer of the vulcanization process in connection with the rubber industry. The important place which rubber occupies in the arts is largely due to our acquaintance with this process. Goodyear's contribution to the advancement of civilization seems to be not generally appreciated.

LITERARY NOTES.

The leading article in *Appletons' Popular Science Monthly* for September will be a discussion of Geological Water Ways Across Central America by J. W. Spencer. This subject is of special interest just now because of the imminence of the Nicaragua Canal. It will be fully illustrated.

MAGAZINE NOTES.

Dr. Moritz Busch, who has been sometimes described as Bismarck's Boswell, and who enjoyed terms of special intimacy with the great Chancellor, is the author of an important paper on Bismarck and William I., which will be published entire in *The Living Age* of Sept. 3. It was written with a view to publication after Bismarck's death, and it contains so much that was communicated to the author by Bismarck himself that it is almost autobiographic.

The relations of England and America continue to be much discussed in the English reviews. Two noticeable articles, looking at the question from slightly different points of view are reprinted in *The Living Age* from the Nineteenth Century. One is by Frederick Greenwood and the other by Sir George Sydenham Clarke.

AUGUST LADIES' HOME JOURNAL.

All those who are fond of bright, entertaining fiction for midsummer reading will find the August *Ladies' Home Journal* enterely to their taste. As usual, the August issue of the *Journal* is largely given up to short stories, there being nine in the one number, and all by well-known writers. These include a picturesquely weird story by Julian Hawthorne ; a strongly realistic tale by Clara Morris, the actress ; a humorous adventure by John Kendrick Bangs, and romances told in a tender key by E. H. Mayde, Abbe Carter Goodloe, Sewell Ford, and Bettina Welch. Virginia Woodward Cloud graphically pictures "A Girl of Salem" in vigorous verse, ond Julia Magruder concludes her novelette, "A Heaven-Kissing Hill."

There is genuiue humor in Robert J. Burdette's "Tongueless Liars," and fresh interest in "Summer Piazza Stories." "Shall Our Girls go to College?" is answered by Edward Bok, who also writes in advocacy of "Giving Allowances to Girls." Mrs- S. T. Rorer tell what is "The Best Diet for Bloodless Girls," and identifies the various kinds of mushrooms growing in the woods that are fit for food. There are practical articles in needlework, millinery and on a variety of homely topics, and the musical feature is a song, "When I Wait at the Bars for Nell." By The Curtis Publishing Company, Philadelphia. One dollar per year ; ten cents per copy.

INTESTINAL ANTISEPSIS IN FEVERS.

Though the Typhoid, Malarial and Yellow Fever epidemics in Cuba have not yet reached this country, it is well to guard against them by taking precautionary measures. If it be true, that the *materies morbii* of these diseases belong to the bacillus group, the remedies manifestly are an antiseptic and an antipyretic. As an intestinal antiseptic we have nothing better than salol. The concensus of opinion is in this direction. When we add the antipyretic and anodyne effects of antikamnia, we have a happy blending of two valuable remedies, and these cannot be given in a better or more convenient form than is offered in "Antikamnia and Salol Tablets," each tablet containing 2½ grains antikamnia and 2½ grains salol. The average adult dose is two tablets. Always crush tablets before administering, as it assures more rapid assimilation. It is not our desire to go into the study of bacteriology here ; our aim is simply to call attention to the necessity of intestinal antisepsis in the treatment of this class of diseases. If in the treatment of these diseases, an intestinal antiseptic is indicated, would not the scientific treatment of the conditions preceding them be the administration of the same remedies? Fortifying the system against attacks is the best preventive of them.

CANADA
MEDICAL RECORD

SEPTEMBER, 1898.

Original Communications.

CANADIAN MEDICAL ASSOCIATION.

ADDRESS OF THE PRESIDENT, DR. J. M. BEAUSOLEIL, 31ST ANNUAL MEETING AT QUEBEC.

GENTLEMEN,—It is now almost thirty-one years since our Association sprang into existence in this hospitable and picturesque city of Quebec. Professional brotherhood then received recognition in all quarters of this country. The Canadian medical family was then formed. Now it may march onward to the accomplishment of the object for which it was given life : The promotion of science ; the protection of professional interests. A distinguished man, one of the Fathers of Confederation, Dr. Tupper—Sir Charles Tupper—was our first President. Since that time, a great number of distinguished physicians have succeeded him in this chair. Indeed, I am greatly confused and moved, though profoundly grateful, when I consider the honor done me by calling me to preside at your meetings. There could have been no question of personal merit; your kindness, gentlemen, directed your choice. I am an admirer and sincere friend of my predecessors, and I desire to follow in their footsteps. I ask you, therefore, to allow me, for a few moments, to dwell upon that part of our programme which touches upon Unity in the Canadian Medical Profession. Gentlemen, if there is a profession that requires liberty of practice in any country, it is certainly the profession of the physician. French civil law not being recognized in all the Provinces of the Dominion, it is easy to understand why a lawyer from Quebec may not

practice his profession in Ontario; but there is only, and can only be, the same anatomy and the same physiology for all the Provinces; the physician is the same everywhere. Why, therefore, this anomaly, that a Canadian physician may not practice in every quarter of the nation's territory? This country, which is so dear to us, can she not nourish her children without dividing them into castes? Why should a practitioner of Ottawa cease to be a practitioner in Hull? Because the British North America Act reserved to the Provincial Parliaments the right, the exclusive right, to legislate in educational matters. Consequently, instead of one Medical Council for the entire nation, we have as many Medical Corporations as there are federated Provinces; and everywhere, of course, as many different legislative enactments. This lack of uniformity has delayed the accomplishment of our professional unity. Notwithstanding this drawback, it cannot be denied that medical science has made real progress in this young country. A loftier idea of medicine, inspired by more intimate relations with the European schools, has given wonderful stimulus to our institutions. The number of schools has diminished, but the quality of the teaching has been made better. Admission to study has been rendered more difficult. The courses, or lectures, consisting of three terms of six months each, have been replaced by lectures which extend over a period of four years. The progress made during twenty years in medical learning has demonstrated the necessity of subdividing the fundamental matters. As a result histology, general pathology, gynæcology, internal and external pathology, ophthalmology, bacteriology, etc., etc., are the subjects of special teaching. Heated theoretical debates of olden times are now decided in the laboratory positively but calmly. To the glory of our great schools must it be said, their students carry off in a few months, and with marked ability, the diplomas of Paris, of London and of Edinburgh. Every year men of learning from France, Germany, England, and the United States honor us by their visits; last year the British Medical Association held its scientific meetings in our midst. A generous rivalry reigns amongst us. In a word, we have reason to be proud of the progress which we have made; and if, as we

hope, the march continues onward, if we know how to concentrate our forces, the Canadian Medical Association will make itself felt in the grand scientific movement that stirs the world. At the sight of the results obtained, and in order to obtain these others that we are now seeking, we ought to consider that it is the proper thing to demolish the barriers that divide the Provinces. Is it not time to give free scope to healthy competition? Why any longer place restraint on the legitimate aspirations of our youthful students? Are our medical schools not tired of the restrictions imposed on the professional liberty of their students? Are our Medical Boards not dissatisfied with the small importance given to the licence that they confer? Without doubt. And a proof of this is the fact, that the majority of the Provinces of Canada have signed the preliminaries of an interprovincial understanding in regard to practice. Our great sister Province of Ontario seemed to desire to remain on the threshold, but she had been stopped, not on account of ill-feeling, but on account of considerations of special legislation, of which she alone could be the judge. To-day she shows excellent dispositions; the Medical Council of that Province has sent a delegation of distinguished men, who are ready, I have no doubt, to bring about the union of the Canadian medical profession. Gentlemen, before ending, I would like to draw the attention of the Interprovincial Registration Committee to the want of preparation of the candidates seeking admission to study medicine. In general, the candidates answer fairly well the questions on languages, history, geography and others, but they are weak in physics, chemistry and natural history. Why should these matters not be the subjects of examination for all the candidates and be of practical value? Such a method would greatly help the work of the student as well as that of the professor. You all know how painful it is to teach a student who is insufficiently grounded. In France a bachelor is only admitted to study medicine after having passed a year in the Faculty of Physical Sciences and in the Chemical Laboratory, after having also, during that year, studied the natural sciences and passed examination on these matters that are regarded as elements in the preparation for study of medical science. Without going so far, let us at present profit

by the lessons of experience, and endeavor to make easy for our students the noble, but arduous work, which they have undertaken. Gentlemen, the considerations that have prevented a great number of physicians from working energetically for adoption of only one licence, which would be recognized throughout all Canada, are:—1. Restrictive legislation granted to each Province by Federal agreement. 2. The fear of destroying Provincial autonomy created by this agreement. To the first objection, I answer that it is true the Federal Parliament cannot legislate in educational matters belonging to the Provinces, but a question that interests two or more Provinces, or better still all the Provinces of our Dominion, ceases, *ipso facto*, to be a Provincial question; it becomes Federal by the coalition of all the local forces. Who can prevent all the Provinces, united, from obtaining from the Federal Parliament the approbation of their union? Moreover, without adopting this means, the Provinces of Manitoba, Quebec, and New Brunswick have already enjoyed reciprocity in regard to their licences; and nobody cried out at the illegality. To the second objection, we may answer that there is no question of destroying Provincial autonomy. In fact there is nothing to prevent the maintenance of the local organization whilst, at the same time, allowing it to delegate its powers to some of its members, who would be charged to form a general commission for the whole Dominion. You all know the old saying: "Where there is a will there is a way." Let us understand one another, and it will be easy to make the competent authority understand us. Gentlemen, when we shall have obtained for the whole of British North America a central bureau of admission to study, a board of medical examination for the conferring of a uniform licence to practise medicine, then, I say, we shall have come upon an era of progress in the annals of Canadian medicine. Our diploma of practice shall be recognized throughout the whole of the British Empire and will meet with the respect of the scientific world, and the Canadian Medical Association will have deserved well of the country. And your humble President will be happy to find that he had helped, ever so little, in the solution of that great national question: Unity of Rights and the Freedom of Practice of our Profession.

THE PIONEERS OF MEDICINE IN THE PROVINCE OF QUEBEC.

By W. H. DRUMMOND, M. D.,

Prof. Medical Jurisprudence, University of Bishop's College.

MR. PRESIDENT AND GENTLEMEN,—Meeting as we do, here at Quebec, the very cradle of our nationality, the place and the occasion is, I think, peculiarly appropriate for recalling to your memory a few of the old-time worthies of our profession; the men who were first to plant the Æsculapian banner on the soil of Canada. It is difficult to write or say anything about the ancient city of Quebec without picturing some of the great events which have occurred in her history for history surrounds us on every side, from the banks of the St. Charles, where Jacques Cartier held his conference with King Donnacona, and erected the sacred emblem of Christianity, to the Plains of Abraham, where fell the gallant Wolfe and chivalrous Montcalm—but I must forbear, and pass on at once to the subject in hand. It was indeed a motley crew that followed in the train of the French merchants, who were first attracted by visions of the fabulous wealth to be acquired in trading with the aborig nes of the New World. Warriors fresh from the battle fields of Europe, men of the proudest lineage of France, and who had breathed the atmosphere of courts,—missionaries whose souls were fired with zeal at the alluring prospect of evangelization awaiting them in the forests of America—and adventurers, daring as ever, followed the standard of William of Normandy. Picture to yourselves, if possible, the harbor of Port Royal, or what is now Nova Scotia, on the morning of July 27, 1606. There is unusual bustle and excitement down by the shore, where the little ship "Jonas," commanded by Captain Poutrincourt, is engaged in discharging her complement of passengers, mostly hailing from La Rochelle. Among the band of newly arrived emigrants there is one sturdy figure which I want you to study well, for it is the figure of Louis Hebert, the pioneer physician of Nouvelle France. We can imagine this young fellow, fresh and enthusiastic, as he strides along, gazing with curious, and occasionally : mused eyes, on the strange sights surrounding

him on every side, and startled when addressed by some wild-looking *Coureur de Bois* or fur-trader, whose semi-Indian attire and savage bearing seemed so inharmoniously to blend with the language of France. From what we are told by L'Escarbot, the historian of the expedition, very little, if any, serious work was done at Port Royal during the succeeding fall and winter. Hunting and feasting, in which, doubtless, our great-great-grandfather bore his part, were the chief occupation of the little colony, and it was only when the wine and kindred supplies became exhausted that the associates of the "Jonas" dropped into the current setting towards Quebec, and with them drifted in the following spring, Dr. Louis Hebert. Quebec at this time, and even some years before, had been merely a fur-trading centre, frequented by roving bands of Frenchmen, who came to barter with the Indians. Hebert, besides practicing his profession of physician, seems also to have engaged in ordinary business enterprises, for we are told by Abbé Ferland that he "Began in 1617 to grub up and clear the ground which forms the site of the present Catholic Cathedral and Seminary, and constructed a house and the first mill erected in the colony, thus becoming not only the premier citizen of Quebec, but also of all Canada." And here it may be well to note that the first time a notary's services were put into requisition in Canada was at the instance of the heirs of Hebert, the physician, thus proving that, in this country, the profession of medicine antedated that of law. Contemporary with Hebert was the surgeon Bonnerme, who came with Samuel de Champlain, when the latter founded Quebec in 1606. Evidently all was not peace in the camp of Champlain, for shortly after his arrival some of his followers hatched a murderous plot against the life of the great navigator. The scheme, however, leaked out, the ringleader was arrested, found guilty and executed. In teaching of the children and nursing of the sick, and the faithful manner in which the original intentions have been carried out, even to the present day, entitle the good sisters to a place among the medical pioneers of this Province. In 1690 when Phipps knocked in vain at the gates of the ancient city, the population under the vigorous administration of

Frontenac had increased to 1,500, and education had made considerable advance. The Jesuits' College, Seminaire des Missions Etrangers and Petit Seminaire were on a firm footing, and we find practicing at Quebec Drs. Gervase Beaudoin, physician to the Ursuline Nuns, Timothé Roussel, physician to the Hotel Dieu, Nicholas Sarrasin, Jean Leger de la Grange, Armand Dumanin and Pierre du Roy. Of the number Sarrasin was perhaps the most noted. Born in France in 1659, he emigrated to Canada shortly after completing his medical course, and died at Quebec in 1736. He was physician to the King, a member of the Sovereign Council, and published during his long life-time a number of volumes of natural history, botany and medicine, besides discovering the pitcher-plant which perpetuates his memory in the name "Saracenia Purpurea." When Peter Kelm, the Swedish Botanist, visited Canada in 1749, seven years after the discovery of the Rocky Mountains by La Verendrye, a native Canadian, his constant companion during many a woodland ramble was Dr. Gaulthier, himself an accomplished botanist, and from Dr. Gaulthier, Kelm acquired most of the information which appeared some years later in the shape of two large volumes illustrated with plates. A well-known surgeon who figured during the historic period before and following the conquest of Canada by the British in 1759 was the famous Phillippe Badelard. Badelard was present at the battle of Abraham, and, seeing that the French troops to which he was attached were giving way, directed his steps to the rear, where he met a wounded Highlander named Fraser, who was bleeding profusely. The doctor immediately attended to the soldier's injuries, and then gave himself up to Fraser as a prisoner of war. Both Dr. Badelard and John Fraser lived to a very advanced age, and ever maintained for each other the closest ties of kindly friendship. Dr. Badelard was a person of most gentlemanly presence, and constantly wore a sword, as was customary with the Bourgeoisie de Paris. A contemporary of Badelard, Dr. Arnoux, lived for many years in Quebec, and it was in Arnoux's surgery that Montcalm's wounds were dressed while the great soldier was being borne through St. Louis Gate. Another well-known surgeon of this period, Dr. Lejuste, of the French army, came

to Quebec after the fall of Louisbourg in 1758, and later among the noted medical men of the Province we find Dr. Francois Blanchet, the father of the first Education Bill in Lower Canada. The cause of education had also in Dr. Jean Baptiste Meilleur an able and successful advocate. Meilleur, who was born in 1756, and died in 1830, had the honor of being the first Superintendent of Public Instruction for Lower Canada, and during his lifetime contributed many articles to *Le Journal de Medicine*. He was also a voluminous writer on geology, botany, agriculture and other scientific subjects, and took a prominent part in the foundation of L'Assomption College. Dr. Jacques Labrie, born in 1783, and who graduated at Edinburgh, sat for several years in the Lower Canadian Assembly, and, besides doing good work as a medical man, also wrote a "History of Canada," which while awaiting purchase by the Government, was unfortunately destroyed by fire at St. Benoit during the Rebellion of 1837. The mention of 1837 will recall to the minds of every student of Canadian history the names of at least three members of our profession, who were prominent among the agitators of that stormy period, namely, Nelson, O'Callaghan and Chenier. Wolfred Nelson, although an English-speaking Protestant, warmly espoused what was then termed the national cause, and led the insurgents at the Battle of St. Denis, where the British forces were obliged to retreat. Twice he was elected to the Presidency of the Provincial College of Physicians and Surgeons, and he also sat in the Lower Canadian Assembly. He constantly contributed to the Medical Press articles on preservation of Public Hygiene, "Reports on Penitentiary Prisons," etc., and although he suffered for a while political banishment, yet his genuine disinterestedness and other noble qualities ever retained for him a very large share of public esteem and respect. Dr. Edmund O'Callaghan, a brilliant Irishman, was a member of Parliament, Editor of the *Montreal Vindicator*, and author of several historical works. He also was an active participant in the troubles of 1837, after which he took up his abode in the United States, and the gallant Chenier immortalized himself by dying a soldier's death at the Battle of St. Eustache. A man who followed the more peaceful paths of life was Dr.

Andrew Fernando Holmes, born at Cadiz in 1797. Dr. Holmes, who was one of the foremost medical men of his time, collected while a student in Scotland an extensive herbarium of plants, which later on he presented to McGill University. He was a recognized authority on Botany, Geology and Mineralogy, and contributed many articles on these subjects, as well as writing the History of Cholera in Montreal. In 1827 he established, with others, "The Medical Institutions," which finally in 1828 merged into that of McGill, of which Dr. Holmes was Dean, and where he lectured on "Practice of Medicine" till the time of his death.

The doctor continued his sketch down to comparatively modern times, dealing with Doctors Wolfred Nelson and Chenier and with others of as late a date as Doctors Morrin and Marsden, of Quebec.

TREATMENT OF INEBRIATES.

Abstract of Paper on the Treatment of Pauper Inebriates.

By A. M. ROSEBRUGH, M.D., Toronto.

In this paper Dr. Rosebrugh recalls the fact that a Commission appointed by the Ontario Government in 1890 strongly recommended the establishment of one or more industrial reformatories in the Province, that this recommendation has been endorsed by the Ontario Medical Association as well as by a large number of influential bodies. That notwithstanding this the Ontario Government declines to give effect to these recommendations on the ground that the number of inebriates in the Province is so large that it would be impossible to undertake the great expense involved in the erection of buildings and the maintenance of the inmates. Under these circumstances the Prisoners' Aid Association of Canada, for some time past, has been looking about for some plan less expensive that might be adopted at once for the scientific treatment of these unfortunates pending the establishment of a reformatory or reformatories in Ontario. In January last, Dr. Rosebrugh was asked by the Association to visit institutions, interview specialists, and, if possible,

formulate a scheme for the economical treatment of pauper inebriates. This was done and the scheme submitted to the Association. The following is an outline of the plan proposed :—1. The appointment by the Provincial Government of an inspector of inebriate institutions. This inspector should be a qualified medical practitioner who has made the medical treatment of inebriates a special study. 2. The inspector should organize in the city of Toronto a hospital for the medical treatment of pauper male inebriates of the more hopeful class, and in other cities of the Province an inebriate department in the existing general hospitals, and more especially for pauper male inebriates. 3. An industrial reformatory should be established on the farm colony plan for the custody of the more hopeless or incorrigible class of drunkards, and where they should be detained on indeterminate sentences. 4. In the adoption of scientific treatment the Norman Kerr-Crothers system or general plan of treatment is recommended. In the interests of science and good morals, proprietary remedies should not be used. 5. The adoption of the "probation system" and giving a helping hand to patients subsequent to treatment for inebriety. 6. In the case of habitual female drunkards my recommendation is that they be sent to the Provincial Reformatory for the full term of two years, and that this be repeated in case of relapse. In case of the more hopeful class of female drunkards I recommend a few weeks' special treatment in any of the existing "Homes" or refuges for females, followed up by subsequent judicious supervision. Arrangements to this end should be made by the Government Inspector. As will be seen there are two unique features in the proposed scheme: firstly, treating inebriate patients in the General Hospitals, and, secondly, the adoption of machinery for finding employment for and giving a helping hand to patients subsequent to treatment for inebriety, Reformed men cannot be expected to remain reformed if they fail to obtain employment. This scheme has not, as yet, been presented formally to the Ontario Government, but the Government Inspector of Hospitals, Prisons, etc., is understood to favor the plan. Dr. Rosebrugh suggests that the proposed scheme be adopted in each of the other Provinces of the Dominion.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

ELECTRICITY IN INCONTINENCE OF URINE.

Capriati (*Edinburgh Medical Journal*) records a case of involuntary enuresis successfully treated by means of the currents introduced into medicine by Morton, of New York. These are known as induced static currents, and are furnished by the oscillatory discharge of Leyden jars connected with an electrical machine. The patient is not insulated, but is connected with one of the jars, while the other is connected with the earth. The intensity of the current is regulated by merely altering the distance between the jars. Capriati's patient was a previously healthy man of 35, who was gradually attacked by weakness and wasting in the left leg, with club-foot and exaggerated knee jerk on that side. There was no reaction of degeneration, but incontinence of urine was very troublesome. The author considers the symptoms to point to limited lesion of the spinal cord in the lumbar region. At first galvanism was tried with the kathode over the dorso-lumbar spine, and the anode on the perineum; this was continued for 10 minutes daily for more than 20 days without any benefit resulting. Endo-urethral faradisation (Guyon) was next adopted, but was so painful that it had to be abandoned after two sittings. Finally, Morton's currents were used in conjunction with the spino-perineal galvanisation. Immediate relief followed, and after the treatment had been carried out every other day for two months, cure was complete as regards the incontinence. As galvanisation by itself had proved ineffectual, the credit must be given entirely to the method of static induction. It was extremely well borne when used in the manner laid down by Bordier. A sound, the end of which formed an electrode, was introduced into the urethra as far as the sphincter of the bladder, and its free end was attached by a chain to one end of the Leyden jars; the machine was regulated to give 6 to 8 sparks a second, and each sitting lasted 5 minutes.—*The Charlotte Medical Journal*, July.

NOSE-BLEEDING.

Dr. Lermoyes advises, in slight cases of nose-bleed, compressing the nose between the thumb and forefinger for ten minutes; if that be insufficient then apply locally a tampon moistened with a 10 per cent. solution of antipyrine, which is an excellent hæmostatic and much superior to cocaine 1.5, which latter not only has the disadvantage of being toxic, but also of being possibly followed by further hæmorrhage after the vaso-constrictor action has passed away. It is also to be preferred to solutions of iron-chloride, which are strong irritants and may give rise to gangrenous ulcers. In more severe cases a canal speculum is introduced, and the anterior portion of the nose tamponed with fine strips of iodoform gauze four inches in length and one in breadth. These are introduced with fine forceps. As the hæmorrhages nearly always arise from the anterior portion of the nasal cavity there is no necessity of tamponing far back. Tamponade of the posterior nares is not only entirely unnecessary, but often brutally dangerous.—*The Charlotte Medical Journal*, July.

VENESECTION AND THE APPLICATION OF LEECHES IN THE TREATMENT OF DISEASE IN CHILDREN.

Abstract of a Paper by Prof. ADOLF BAGINSKY, of Berlin, in the *Berlin Klin. Wochenschrift*, No. 21, May 23rd, 1898.

By LUDWIG FREYBERGER.

In a most interesting, exhaustive, and practical paper Prof. Baginsky discusses the important question, "Should bleeding be tried as a last resource in certain diseases of children?"

After reviewing the history of venesection as a therapeutic measure in the treatment of diseases in children, Prof. Baginsky quotes three cases in which venesection had been recently performed by him, with the result that the lives of the patients were saved.

Case I. A girl, seven and a half years old, was admitted to Prof. Baginsky's clinic for diseases of children, with the diagnosis "pneumonia and morbus cordis"; there was orthopnoë, extreme cyanosis, and recession of the intercostal spaces; the heart's action was galloping and arhythmic. Injection of camphor, inhalation of oxygen, and tinctura strophanthi internally had only a temporary effect. Face, thighs, and legs became œdematous; numerous large and

subcrepitant râles were heard in both lungs, even over the area of heart dullness; the liver was large—its lower margin could be felt two inches below the costal margin; the urine scanty, concentrated, contained half a volume of albumen, red and white corpuscles, epithelial and granular casts.

Two days after admission, after all medical treatment had proved ineffective, and the pulse became impalpable at the wrists, venesection was performed on the right arm, and 120 cubic centimetres of dark purple blood were withdrawn. The cyanosis disappeared almost instantaneously, the lips became red again, the pulse at the wrists returned, and the child slept quietly for some hours. In the evening the child was slightly delirious, and the breathing became somewhat stertorous. One leech was applied to the left mastoid process. The next morning there was considerable improvement; pulse 130 to 160, respiration 40, temperature 100° F. The lungs were inflated, the area of heart dulness small; at the apex there was heard a loud systolic bruit; the first aortic sound was muffled, the second loud.

Under treatment with digitalis, calomel, and Wildunger water, the amount of urine rose to 1000 cubic centimetres *pro die*, fever and dyspnœa subsided, and the child was convalescent on the fourteenth day after admission. There were now definite symptoms of mitral incompetence.

Case II. A boy, nine years old, who had previously been treated by Prof. Baginsky, for chronic fibrous pneumonia, with bronchiectasis, was again admitted (after two years) in a condition of extreme dyspnœa. The face and hands were dusky; there were numerous rhonchi in both lungs, which could be heard at a distance; there was marked inspiratory recession of the intercostal spaces. No pulse could be felt at the wrists. The child was somnolent. Mustard baths and injections of camphor had no effect. The right median vein was opened, and about 100 cubic centimetres of dark cyanotic blood were slowly withdrawn. During the venesection the cyanosis lessened, but the dyspnœa remained the same for about seven hours afterwards, when the pulse became fuller and palpable; its beats numbered 116 per minute, the respirations 52.

The boy fell asleep soon after midnight, and, although the first hours of this sleep were restless, he became quiet towards the morning, and woke up at eleven o'clock practically convalescent. The number of respirations was 38, the pulse 100. He asked for and took a considerable amount of milk. There was consolidation, with harsh bronchial breathing, in the left lower lobe posteriorly; catarrh, with moist râles, in the rest of the lungs; the heart sounds were muffled

and weak; the urine contained albumen, and numerous hyaline and granular casts. The expectoration was copious, nummulated. Some days afterwards the boy was discharged in a materially improved condition of health.

Baginsky, in commenting on these two cases, says that in both cases death was imminent at the moment when venesection was decided upon; and although in case No. II. the effect was less obvious, the improvement which set in a few moments after the vein had been opened was unmistakable.

Case III. A girl, seven years old, suffering from "pneumonia," was admitted in a state of extreme dyspnœa and collapse; no pulse could be felt at the wrists; instead of the heart sounds there was a muffled double murmur; the cyanosis was very great. Injections of camphor and mustard baths had no effect. There was loud tracheal rattling.

Venesection, first on the right and then on the left arm, was performed, but no blood would come; as the child was practically moribund, the left radial artery was opened, and 80 cubic centimetres of deeply venous blood were withdrawn. The cyanosis decreased almost at once, the pulse at the right wrist became palpable, the dyspnœa lessened, the child became brighter, and on being questioned, answered that she felt better. There were now moist râles heard in both lungs, which were considerably inflated; there was no dullness on percussion. The area of cardiac dulness was small. When the cyanosis had entirely disappeared a livid measles rash was noticed on the chest.

The child soon became convalescent, and was discharged cured.

Prof. Baginsky explains the instantaneous and life-saving effect of venesection (in Cases I. and II), and arteriosection (Case III), by the sudden and effective relief which is given to the engorged and tired heart.

The effect is purely mechanical; naturally the right ventricle of the heart ought to be sought to be relieved first, but if this has no effect, as in Case III., then the left ventricle must be relieved by arteriosection. The author compares the effect of venesection to that of tracheotomy or intubation; just as the latter mechanically removes the impediment to respiration, and thus relieve the respiratory asphyxia, so does the former remove the impediment to circulation, and thereby lessens the danger of asphyxia from over distension of the heart.

More than temporary mechanical relief must not be expected from venesection. In cases in which the reserve force of the patient must have already been spent, or the poisonous effect of the toxins had been too great, Prof. Baginsky

has not been able to avert death, even by repeated venesections. The cases which thus ended fatally, were one of pneumonia, one of capillary bronchitis, and one of broncho-pneumonia.

The author recommends the application of leeches in cases of simple and uræmic eclampsia, provided there is much engorgement of the vessels of the brain, and the child is strong; but he emphatically—and we think rightly—condemns the practice of withdrawing blood by venesection in cases of infectious or other diseases, and during convalescence, in order to search for micro-organisms or toxins in the blood of children.

We have abstracted Prof. Baginsky's paper at some length because we believe that, practised within the limits which are set by the author—namely, engorgement and impending paralysis of the heart in cases of acute capillary bronchitis, broncho and lobar pneumonia, bronchiectasis and chronic fibrosis of the lungs when complicated by heart disease; and simple and uræmic eclampsia—venesection may in certain desperate cases prove to be life-saving; and, secondly, because we hope that some of our readers might perhaps be induced to favor us, for the purpose of publication in this journal, with an expression of their opinion or experience as regards venesection as a last resource in the treatment of certain diseases in children.—*Treatment*, July.

ON THE ORIGIN OF POST-MORTEM ECCHYMOSES.

By Prof. Dr. Albin Haberda (*Vierteljf. ger. Med.*, April, 1898.)

The late Prof. von Hofmann at Vienna was the first to draw attention to the important fact that in dead bodies ecchymoses may not only become more extensive owing to hypostatic congestion, but that capillaries may even burst, and thus produce hæmorrhages which differ in nothing from those petechial hæmorrhages which occur during life.

When bodies, twenty-four to forty-eight hours after death, are suspended, it is possible to produce extreme degrees of hypostatic congestion, but no ecchymoses—a result which has been confirmed both by the author and Prof. Lesser; but if bodies were suspended a *short* time after death the results obtained were as follows:—

In all the bodies of seven newly born infants which were suspended shortly after death, small punctiform or streaky hæmorrhages were produced in the conjunctiva of the eyeball a few to twenty-four hours after suspension, which could not be distinguished from ordinary ecchymoses which had been produced during life.

It was also possible to watch the gradual enlargement of these hæmorrhages; in some instances small petechiæ were produced, even in the cortex of the hemispheres of the brain over the con-

vexity, which looked like those produced by commotion or capillary embolism.

If one considers that before the suspension of the bodies there was not the slightest evidence of conjunctival hæmorrhages, even if examined with a magnifying lens, then there can hardly remain a doubt as to the causation of these ecchymoses by hypostatic congestion.

The author has been able to confirm his experiments at many *post-mortem* examinations made both by himself and the late Prof. von Hofmann.

It is not a rare thing to find numerous petechiæ in the skin over the chest or abdomen, the shoulders, arms, neck, and face of bodies of people who have been found dead, lying in bed with the upper part of the body hanging out over the edge of the bed.

These hæmorrhages vary from the size and appearance of a flea-bite to that of a small lentil, and are either bright red or dark brown. They are found not only in bodies of people who died of epilepsy or of suffocation, but also in bodies of people who have died in the course of disease, as the following cases will show :—

A woman, forty years old, was found dead. She had in the night previous to her death complained of shortness of breath. The body was found lying on the stomach across the bed, so that the head and thorax were outside the bed, resting on a box which stood by the side of the bed. The skin of the face, neck, chest, shoulders, and arms was dark violet, and showed numerous petechial and slightly larger ecchymoses. A great many ecchymoses were found in both conjunctivæ, and the mucous membrane of the pharynx, larynx, and trachea. The *post mortem* examination revealed the presence of an enlarged thyroid gland, atheroma of the aorta, and a flabby fatty heart.

Another woman, seventy-four years old, was found dead in a position similar to the one described above. At the *post-mortem* examination was found an adherent pericardium and brown atrophy of the heart, purulent bronchitis, and pneumonia of the right lower lobe. The skin of the face, neck and back showed numerous petechiæ, which varied in size from that of a pin's head to that of a lentil; several large ecchymoses were found in both conjunctivæ, and one large one on the left upper eyelid.

But it is not necessary that the bodies should be found in a dependent position; even those which are stretched out horizontally on their back show sometimes—especially when their blood remains liquid for a long time—quite a number of petechiæ on the back and the lateral sides of the chest and abdomen.

The fact that these petechiæ are more often found in old people justifies the supposition that the greater vulnerability of the walls of the capillaries in old people predisposes their bodies to ecchymoses of this kind.

Occasionally these ecchymoses are found in the bodies of persons who died from prussic acid poisoning, and in children who have been suffering from rickets or acute and chronic gastro-enteritis. It is quite possible that the origin of these *post-mortem* petechiæ is to be sought in minute capillary hæmorrhages which occur in the agonal stage, and become only visible after death

owing to hypostatic oozing of blood from minute rents in the capillary walls. This explanation holds good especially in cases of death from suffocation (strangulation, epilepsy), where one finds numerous petechiæ in *post-mortem* stains, besides ecchymoses in mucous and serous membranes, which are in such a position that they cannot be explained by hypostasis. Small hæmorrhages in the subcutaneous tissue, between muscles, and in mucous membranes must be considered to be due to hypostatic rupture of small vessels, if any coarser lesions (as laceration of muscles, *e.g.*) are absent.

A man, thirty-eight years old, a notorious drunkard, died suddenly while he was having his dinner, in consequence of the impaction of a large piece of meat in the larynx. The skin of the face, thorax, especially on the left side, and that of the left arm, was dark violet colour, and contained an enormous number of small ecchymoses. Both crico-thyroid muscles were perfectly infiltrated with blood, as was also the adventitious coat of the great vessels of the neck on the left side. There were also two small hæmorrhages in the deeper layers of the pectoralis major. The heart was covered with small subepicardial ecchymoses and contained perfectly liquid blood.

In the absence of any muscular or coarser vascular lesions one cannot do otherwise than ascribe the petechial hæmorrhages to hypostasis.

The differential diagnosis between *post-mortem* ecchymoses and those produced during life is very difficult as long as the hæmorrhage is only small. Theoretically, one might say that in intra-vitam hæmorrhages the blood ought to be coagulated; but we know now that the blood retains its coagulability for some hours after death; and if, as is often the case, a *post-mortem* hæmorrhage takes place in between muscle fibres, it may be impossible to remove it from thence with water. But when one finds on cutting into an ecchymoses that the blood flows out by itself or on gentle pressure, then it is clear beyond doubt that the ecchymosis has occurred after death.

Microscopically, one finds in *post-mortem* ecchymoses the capillaries and smaller vessels distended with blood; the tissue round the vessels—in an unstained section—has a yellowish tint owing to the diffusion of blood-colouring matter. The blood clot formed by the hæmorrhage is not uniform, but consists of numerous smaller hæmorrhages, which, in the skin for instance, are found in and around the papillæ of the cutis, or are grouped round the cutaneous glands and hair follicles. The blood corpuscles are quite distinct, not caked together, and pale.

Hypostatic ecchymoses may also be found in internal organs, so in the posterior parts of the lung and of the heart; such ecchymoses are not to be found in cases of suffocation only, but also in the bodies of persons who died from other causes, as, *e.g.*, subacute phosphorus poisoning.

In the body of a man who had shot himself, and whose body was found floating in a river, the author found numerous petechiæ on the anterior surface of the heart. In the bodies of two men who committed suicide by hanging in such a manner that their

bodies were found lying on the stomach while their faces nearly touched the ground, the ecchymoses were nearly all on the frontal aspect of the body; one body had a single ecchymoses over the back, the other had no ecchymosis on the back at all.

A similar distribution of ecchymoses is often found in infants who died somewhat suddenly.

A girl two and a half months old was found dead in her cot. At the *post-mortem* examination it was found that she had died of acute capillary bronchitis. The left side of the face, thorax, and the left lung, and the epicardium over the left ventricle showed numerous ecchymoses; the right lung none.

Another girl, seven weeks old, died of purulent bronchitis. The back and the left side of the thorax, the left lung, and the left ventricle showed a great number of large and small ecchymoses. The right side of the body was practically free from them.

A third girl, fourteen days old, died suddenly of acute bronchiolitis. In this case the organs on the right side of the body showed many ecchymoses; those on the left side none.

In the fourth case, a girl, six months old, who had died suddenly of acute bronchitis, the ecchymoses were found in the organs on the left side.

In a fifth case, a girl, four months old, who died suddenly while suffering from acute gastro-enteritis, both lungs, the heart, and thymus showed numerous ecchymoses scattered throughout the organs without any definite distribution.

In all cases the blood was fluid.

The cases which we have just quoted are very important, because they restrict considerably the diagnostic value of ecchymoses, even of the internal organs. Our daily experience teaches us that during life ecchymoses are much more frequently observed in children than in adults. The same seems to hold good also as regards *post-mortem* ecchymoses in internal organs, whereas cutaneous ecchymoses are more frequent in adults than in children. It cannot be doubted that occasionally ecchymoses are formed in the lungs, the heart, and the thymus in consequence of the pressure of the blood, which, following the law of gravitation, after death is collected in the dependent parts of the body; but it must also be remembered that in many instances minute lesions may have occurred in the walls of capillaries during the agonal stage, which, after death, become larger, and therefore visible to the naked eye.

Nothing could be more injudicious than to diagnose death from suffocation because a few ecchymoses have been found under the pleura or the pericardium of children who have been found dead in bed. Such ecchymoses are of diagnostic value only when they appear in parts where there is not or never has been any hypostatic congestion, when there are signs of hyperæmia and congestion which have existed during life, and when infectious and septic diseases, diseases of the blood, and indications of poisoning can be absolutely excluded.—*Treatment*, July.

CYSTINURIA.

The presence of cystine in the urine is of rare occurrence, and but few cases are recorded in which this substance has been

detected in the secretion. In the *Practitioner* for May, 1898, Dr. Walter Smith gives an article on Cystinuria. The author in referring to the history of the affection remarks that it is nearly ninety years since Wollaston described the presence of a substance, to which the name cystine was given, in a urinary calculus. From this time not more than eighty cases have been reported in which cystine has been found in the urine. Clearly, therefore, the condition is of very rare occurrence. In the first case recorded by Dr. Smith, a boy of eight, the general health was in all respects good. The mother had noticed that the odour of the urine was peculiar, like that of orris root. It deposited a greenish sediment. Only once was cystine discovered. The second patient was a female, aged fifty-two. She had complained of pain in the legs, but the general health was good. The urine was greenish yellow in colour, and threw down a white sediment. This consisted of six-sided crystals of cystine. There does not appear to be any morbid symptom, or chain of symptom, which can be connected with the presence of cystinuria. Its occurrence seems to be more or less purely accidental. Dr. Smith considers that cystine is a result of disordered metabolism. He gives an account of the views which have been held as to its chemical constitution. It is scarcely necessary to say that physiological chemistry does not throw much light on the significance (if any) of cystinuria. As regards treatment, Dr. Smith lays stress on the necessity of disinfection of the intestines. This proceeding can do no harm; but in view of the fact that we are altogether ignorant of the mode of production and origin of cystine, whilst at the same time we know of no morbid changes (beyond the formation of calculus) associated with its occurrence, disinfection of the intestines seems quite superfluous.—*Treatment*, July.

THE TREATMENT OF CARDIAC AFFECTIONS DEPENDENT UPON ARTERIO-SCLEROSIS.

In the *Journal des Practiciens* the following treatment for this condition is given:—

The diet is carefully regulated, and small quantities of meat are administered. Potatoes are to be avoided, and green vegetables employed. In regard to medicinal treatment the following potion may be employed for the purpose of increasing elimination of calcareous material: bicarbonate of sodium, two and a half drachms; neutralize this with a sufficient quantity of lactic acid, and add lactic acid and simple syrup, two and a half drachms, and distilled water six ounces. Take this quantity during a period of twenty-four hours. It is stated that the lactic acid will augment the elimination of calcareous materials and increase the quantity of the urine, and that under this treatment the patient will be relieved to a great extent of symptoms of cardiac dilatation or asthenia, dyspnœa, cyanosis, œdema, and attacks of angina.

DIGESTION FEVER IN CHILDREN.

(*Med. Mod.* No. 14, 1898.)

Dr. Comby describes under this name an intermittent fever which is produced by the absorption of faulty products of digestion, and

is most frequently observed in children between three and ten years old. Nearly all of the children thus affected are suffering from chronic dyspepsia, and had been hand fed; most of them are also rickety. One frequently finds in these children insufficiently nourished and exhibiting the symptoms of atonic dyspepsia and distension of the stomach. About eighty per cent. of the cases of digestion fever occur between the months of May and July, probably, as Grasset thinks, owing to the ingestion of large quantities of water. It is more frequently found in boys than in girls.

Without any definite symptoms, the children feel ill, look pale, are anorexic, and dull. Two or three hours after meals their temperature rises to a moderate height (100° to 101° F.), their sleep is disturbed, heavy, they perspire much in their sleep, and dream often and bad. In the morning the children wake up with normal temperature, but look pale and ill. These attacks recur with more or less regularity and frequency. The fever sometimes reaches 102° to 104° F, and usually lasts for a couple of days. Exacerbations of this kind are fortunately rare. Liver and spleen are not enlarged; there is constipation and utter loss of appetite. Voracity is rare, whereas the children frequently complain of much thirst.

There is a strong tendency for this affection to run on to troublesome gastro-enteritis, or even membranous enteritis.

Regulation of diet is the most important feature in the treatment of this affection.

The children must not be given wine and hot and spiced dishes, sweets, cheese or tea. They must not eat beef or pork. Toast, soup, spinach *à la purée*, stewed fruit, sheep's or calf's brain, veal or mutton cutlets, roast or boiled fowl, or pigeon, for the mid-day meal, is all that ought to be allowed. There ought not to be more than three meals a day, of which the mid-day meal must be the principal one. No more than half a pint of milk or water may be allowed for a drink at each meal.

Quinine and alcoholic tonics make the condition only worse. If the constipation cannot be overcome by regulation of the diet, then Comby orders the following powder, of which he lets one be taken twice daily before meals :—

℞. Sodii bicarb..... gr. 5
Magnes. levis..... " 10
Napthol..... " 3
Pepsin..... " 1½
Ext. nux vomica..... " ⅛

Da. in wafers; tales doses twenty.
S. One cachet before the morning and evening meals.
Or—

℞. Sod. bicarb..... gr. 4
Magnes. levis.
Pulv. rhei.....āā " 3
Pancreatin..... " 1
Ext. nux vomica..... " ⅛

Da. in wafers; tales doses twenty.
S. As above.
If diarrhœa be present, then magnesia and rheum may be re-

placed by bismuthum salicylicum. If the tongue is much furred and the motions fœtid, the calomel in doses of one-sixth to one-third of a grain, with five grains of saccharum lactis, repeated every two hours four or five times a day for three days, will be found very useful.—*Treatment*, July.

THE DIFFERENT FORMS OF COLITIS IN CHILDREN.

(*Revue Mensuelle des Maladies de l'Enfance*, March, 1898.)

Dr. L. Guinon, of Paris, in a very interesting paper describes the different forms of colitis in children in the following manner:—

In the acute form of colitis the most prevalent symptoms are repeated vomiting, meteorismus, and tenderness of the abdomen, which might almost lead one to suspect the onset of peritonitis or typhoid fever; but frequency of motions and flatus and tormenting tenesmus soon lead one to make the correct diagnosis.

In the localized form of acute colitis, the ascending colon and the cæcum are mostly affected; the right iliac fossa and epigastrium are distended and the seat of violent colic pains. This affection differs from appendicitis by the less severe character of the pain, the diarrhœic motions, and the fact that the application of the ice-bag makes the pain worse. The diagnosis is very difficult if both affections are present at the same time. In most cases the symptoms subside rapidly; in others the inflammation creeps along the colon.

When the descending colon, the sigmoid flexure, and the upper part of the rectum are affected, then the pain is localized in the iliac fossa, and there is much tenesmus at defæcation.

In the dysenteric form of colitis the symptoms are more or less those of sporadic dysentery.

Chronic colitis is much more frequent than is commonly believed, especially in children over two years old when they had been suffering from chronic constipation. The onset may be sudden or slow. The children look pale and anæmic, the skin of the face and the neck is pigmented, dark rings encircle their eyes; their lips have a peculiar red color; they are very thin, very susceptible to cold weather; their feet are cold, but their hands are burning hot. The base of the tongue is covered by a thick white fur; their breath smells bad. The abdomen is in most cases distended and tender; in others flat and painless. The pain is mostly localized in the iliac fossa. The children are excitable and quarrelsome, or depressed and languid. The attacks of griping pains come on suddenly, often while the child is at play, or when his abdomen is slightly touched with the finger. Constipation is prevalent; hard, black, globular fæcal masses are expressed with difficulty; there may also be prolapsus recti. The motions are covered with streaks of slime and blood; their smell is foul. In other cases diarrhœa and constipation alternate with one another; the motions are fœtid, and mixed with brownish green frothy mucus. This kind of motion is especially frequent in children who have been put on exclusive milk diet. Fæcal concretions are sometimes to be found in the motions during these attacks of diarrhœa. The

appetite is bad or varies; digestion is painful, slow, and often accompanied by rise of temperature (digestion fever); the urine has a strong, repulsive smell, and contains much indican. Such children grow very slowly, their bones and muscles remain very slender, their thorax narrow; signs of rickets are always absent. The affection is very troublesome to treat; neurasthenia is one of its commonest sequelæ; appendicitis is a rare complication, but cystitis is pretty frequent.

Papillar and pustular rashes on the extremities and abdomen are common; the face is seldom the seat of eruptions of that kind; purpura, diffuse morbilliform erythema, convulsions, and symptoms of meningeal irritation may sometimes be found to accompany acute or chronic colitis.—*Treatment*, July.

A NEW DIAGNOSTIC SIGN OF MEASLES.

Under the above heading Dr. Henry Koplik, of New York (*Med. Rec.*, April 9th, 1898), describes a phenomenon which he considers a very valuable sign in the very early stages of measles. It consists of an eruption which appears on the mucous membrane lining the cheeks and lips. It can be seen only in very strong daylight falling from a window direct on the mucous membrane. It is then necessary to evert the mucous membrane covering the lips and cheeks, either with the fingers or by means of a spatula. One can then see by close study the infinitesimally minute bluish white specks on a reddish punctate area in beginning measles, and on a more diffusely reddened background in advanced cases, which are absolutely pathognomonic of measles.—*Treatment*, July.

THE ALKALINE SILICATES IN WEAKLY MINERALIZED WATER.

The therapeutic action of simple thermal springs has been variously attributed to their thermality, to the action of ordinary water when used internally and externally, and to peculiar electrical conditions. Dr. J. Felix (*Gazette des Eaux*, May 19th 1898) discusses the possibility that these waters may owe some of their beneficial properties in various diseases to the alkaline silicates which they contain. This question has been already to some extent considered by various writers, and Dr. Alvarenga, of Lisbon, has attributed to the silica and alkaline silicates the curative effects of certain springs in cases of gout and rheumatism. Duhourcau, of Cauterets, and Schlemmer, of Mont-Doe, think that the alkaline silicates contained in many thermal waters can exercise a certain antiseptic effect. A few years ago a brewer, wishing to obtain a good supply of pure water for his brewery, had an artesian well sunk at considerable cost to himself. Great was his disappointment to find that with this water the necessary fermentative process was hindered, so that he could not make any beer. Analysis of the water showed that, though weakly mineralized, it contained several centigrammes of alkaline silicates in the litre. Felix finds that solutions of one or two grammes alkaline silicates in a thousand grammes of distilled water have a decided antiseptic action, similar to that of perchloride of mercury and carbolic acid, but are not corrosive,

toxic, or irritating—at least, in quantities of one or two grammes in a thousand grammes of water. This antiseptic action of solutions of silicates may explain their action in cutaneous affections, vaginal discharges, conjunctivitis, etc. In another article (*Annales d'Hydrologie*, March, 1898) Dr. Felix mentions that alkaline silicates have a solvent action on uric acid. If a bottle of the water of Sail les-Bains (which contains about 0.13 per mille silicates) or a litre of a two per mille solution of sodium silicate be poured into a vessel the walls of which are encrusted with uric acid ("red sand"), the uric acid will be dissolved in a very little time. If, on the other hand, the muriated water of Châtel-Guyon be poured into the vessel, the uric acid will not be dissolved, but will be detached from the side of the vessel and held in suspension, as if Châtel-Guyon and similar waters have the power of dissolving the mucous material by which the uric acid is attached to the side of the vessel, but cannot dissolve the uric acid itself as well as waters containing little else in solution except alkaline silicates.—*Treatment*, July.

ACTION OF MUD AND PEAT BATHS.

Behse (*St. Petersburger Med. Woch.*, 1898, No. 10), who practises in Pernau in Livonia, where both peat baths and mud baths are employed, discusses the action of both these kinds of baths. He agrees with Braun and Kisch that semi-solid peat baths can be taken at a higher temperature than ordinary baths of water. Braun compares them to thermal baths at high elevations. Kisch says that peat baths at 39° C. (= 102.2° F.) can be regarded as indifferent in temperature. Behse explains the phenomenon in the following way. He supposes that the particles of peat next the skin rapidly give off heat to the skin until they fall to the same temperature as the surface of the bather's body. The result is that, owing to the firmness of the material used for the bath, the bather soon after the commencement of the bath, unless he changes his position in the bath, sits enveloped in a layer of peat at the same temperature as the surface of his body. Jacob found that in cool peat baths the skin of the bather during the first five minutes is cooled just as it is in baths of water at the same temperature; however, in peat baths the temperature of the skin then rises again, and after some time is found to be two or three degrees Centigrade higher than when water is employed for the immersion instead of peat. Amongst other differences in action between baths of peat and baths of water he notes the chemical stimulation of the skin in peat baths, and the massage effect on the skin when the bather moves about in the semi-solid material. Behse sums up as follows:—

1. Peat baths stimulate the skin, but influence the bather's temperature less than ordinary baths at the same temperature.

2. Through the friction caused by the bather's movements a mechanical stimulation is obtained in addition to the chemical one.

3. In regard to pulse, blood pressure, respiration, and metabolism, peat baths appear to exert no distinctly different action to ordinary baths, except that, according to Julius Glax, a somewhat lower temperature in peat baths corresponds in these respects to a somewhat higher temperature in ordinary baths.

Dr. Behse proceeds to discuss the various kinds of mud baths.

At Abano, Acqui, and Battaglia, in Italy, the mud is used either for single parts of the body or for the whole body. A layer of mud about six centimetres in thickness is employed. The hot mud is spread over a linen sheet laid out on a mattress, and the patient lies down on it. The front part of his body is then covered in the same way, and with his muddy covering he is then kept wrapped up in woollen blankets for half an hour. After this he is allowed to sweat in a warm bed for half an hour. The mud used in Italy is very hot (51°-52° C.), and so it is also at Pistyan, in Hungary. In the south of Russia the patient lays on a slab, and is more or less thickly covered with mud. The mud is used very hot (52° C. on the surface, but 10° C. cooler inside). Full baths are heated to 41°-43° C. Mother-lye is added to the mud. At Plattensee in Hungary, in Norway and in Sweden, the mud is chiefly used for rubbing the body with, in association with warm water affusion, douches, massage, and flagellation with birch twigs. At Pernau and Arensburg, in Livonia, baths of diluted mud (to which salt is often added) and mud compresses ard employed. The full baths are not heated beyond 38° C., but the mud compresses are employed warmer. [Complete baths of the undiluted mud would be very expensive at Pernau on account of the great cost of carriage.]

It is clear that the action of mud baths must vary very much, according to the various modes of application. In Sweden and Norway there is especially the mechanical stimulation by the rubbing to be considered; in Italy and South Russia the high temperature of the application is a special feature; and when mother-lye is used with the mud, as it sometimes is in Russia, it exerts a chemically stimulating action on the skin. Motschutkowsky, Koretzki, and Troitzki found that in mud baths of 34°-41° C. the pulse frequency and blood pressure are first raised, then lowered; respiration is increased in frequency; the temperature of the body is raised 1°-3° C. if the duration of the bath is prolonged. By frequently repeated mud baths the weight of the body is lowered; the amount of urine is lessened and its specific gravity raised; the amount of nitrogen excreted is at first below the normal, but afterwards increased; the sulphates and phosphates are below the normal. The thermal effects of the diluted mud baths employed at Arensburg and Pernau must be, Behse thinks, much the same as those of ordinary baths of the same temperature. According to the an lyses quoted, it appears that the Pernau mud is richer than the Arensburg mud in chlorides and in chalky and organic constituents, whereas the Arensburg mud contains more sulphides and silica.—*Treatment*, July.

TABES DORSALIS AND THERMAL BATHS.

Donadieu (*Gazette des Eaux*, 19th May, 1898), in his paper at the Montpelier Medical Congress, expresses his opinion on the thermal treatment of tabes at Lamalou. During the first period of tabes—that of "lightning pains"—the temporary disorders of sensation (lightning pains, gastric crises, etc.), he thinks, are ordinarily benefited or cured after one or several courses of the spa treatment, though the more permanent disorders of sensation (girdle sensations,

feelings of constriction, patches of hyperæsthesia and anæsthesia, etc.), do not yield so readily. During the second period the ataxy and other motor troubles become more and more resistant to the thermal treatment, and in the third period (that of great inco-ordination of movement) very little benefit can be derived from the spa. As contraindications Donadieu mentions rapidly progressive (malignant) tabes, signs of inflammation, and sudden fever. He considers as unsuitable that class of patients who become hyperæsthetic under the treatment, and on whom the baths exercise no sedative effect. The cases in which the diagnosis can be made early are the ones preferred for Lamalou. Mercurial cachexia, arthritism, and the effects of overwork may be remedied by the spa treatment, and antisyphilitic treatment may in suitable cases be combined with the cure, or employed during the interval between two courses of treatment.

M. A. Bélugou (*Annales d'Hydrologie*, May, 1898) compares the French spas of Lamalou, Néris, and Balaruc in the treatment of tabes, and comes to the following conclusions. In arthritic subjects Lamalou is specially suitable, while Balaruc is contraindicated. In scrofulous and lymphatic subjects Balaruc is preferable to Néris or Lamalou. In the case of tabetics with neuropathic inheritance and nervous temperament Balaruc is contraindicated, whilst Néris suits the erethic and excitable subjects, and Lamalou has advantages in "irritable weakness" and depression. Lamalou, which, besides its baths, has the advantage of ferruginous and arsenical waters for internal employment, is suitable for cases of tabes following on fatigue and exhaustion and excessive venery. Bélugou maintains that the various symptoms of tabes should influence the doctor in his choice of a spa. Thus Balaruc should not be selected in hyperæsthetic and painful cases. Balaruc and Lamalou he prefers when there is paresis of the bladder and intestines, and Lamalou when the sexual functions are enfeebled.

At several health resorts methodical exercises are now carried out for the inco ordination of tabes, a plan first introduced by Dr. Frenkel of Heiden, in 1890. It seems as if this method of treatment can really be of use for the ataxy of chronic and quiescent cases of tabes. The faulty sensation which is the cause of the atactic movements can apparently really be, to some extent at least, obviated by getting the patients to educate their remaining powers —in accustoming them to rightly interpret whatever sensations (even altered sensations) they have left to them.—*Treatment*, July.

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.

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Mayo (*Medical Record*, June 11, 1898) gives some observations on the diagnosis and surgical treatment of certain diseases of the stomach. He speaks especially of cancer of the stomach, and after some discussion continues as follows:

The method of pylorectomy we have followed has been

so speedy and satisfactory that I would like to call your attention to it. The ease with which any desired amount of stomach can be excised is especially noticeable—in one case the upper suture angle lying behind the left costal arch in close proximity to the cardiac orifice and passing obliquely downward and to the right more than six inches in length, making a sort of shovel nose to the amputated end. I make no claim to originality, although I know of no method of equal simplicity; and in the cases referred to and also in a number of cadaver operations the details were readily carried out. The steps are as follows :—

1st. A median incision above the umbilicus, and, if needed, a cross-cut of the rectus.

2d. Double ligation and division of the necessary amount of gastro-hepatic omentum ; this allows the pylorus and lesser curvature to be delivered. The fingers are now in the lesser cavity of the peritoneum, and at once slip under the pylorus and act as a guide to the careful double ligation and division of the gastro-colic omentum attached to the malignant area.

3d. The diseased part is isolated by a piece of gauze drawn under it, and a pair of forceps are caught from each side, separating the diseased from the healthy stomach and also preventing leakage from below. With a knife a circular cut is made completely around the healthy portion of the stomach to the mucuous coat. The muscular and peritoneal coats are stripped back and a few bleeding points caught with forceps. The mucous coat is cut inch by inch and at once closed with a continuous catgut suture; this is cut short and the detached pylorus and tumor are covered and turned out of the way. A second continuous catgut suture of the muscular coat rolls in the mucous, while outside of this a good silk Lembert of the peritoneum and muscular coats protects and rolls in the two first rows of sutures.

4th. The end of the stomach is slipped to the right and the ends of the tied omenta are sutured to each other and to the suture line, not only making further protection, but also anchoring the stomach to the right and preventing undue traction upon the duodenum after it is fastened in place.

5th. The duodenum is cleanly amputated at a healthy point and buttoned with a Murphy button to the anterior lower wall of the stomach.

We have done this operation once in forty-five minutes, once in one hour and five minutes, and once in one hour and twenty-five minutes. I mean by this, from the time the operation was commenced until the dressings were in place, and in each case from four to six and one-half inches of stomach had been excised.

LEFT SUBCLAVIO-AXILLARY TRAUMATIC ANEURISM—LIGATION OF SUBCLAVIAN ARTERY IN ITS SECOND STAGE—RECOVERY, WITH PERFECT USE OF ARM.

H. G. Croly, Dublin (*Med. Press and Circ.*, London, Vol. CXVI., No. 7, p. 155), places on record the first Irish case of ligation of the subclavian artery in its second stage, the patient being a strongly built garden laborer, aged 37 years. In a dispute he was stabbed with a tailor's scissors below the left clavicle and again above that bone, the hemorrhage being profuse. On admission to the hospital there was noticeable merely an oozing from the wounds, a hematoma, conical in shape, and about the size of half a cocoanut, having formed. Compresses and bandages were applied to the wounds at the time. Gradual improvement followed upon profound collapse. A loud bruit with a distinct pulsation, absence of radial pulse and powerless condition of the arm were noted. Ice-bags were applied to the tumor, followed later on by a shot bag and Esmarch's bandage, and rest. The arm and hand remained powerless for four months, although the hematoma gradually diminished in size. Upon re-admission into the hospital fourteen months later, because of constant axillary pain, he having returned to work in the meantime, a large pulsating tumor was found occupying the subclavicular axillary space, the shoulder raised, the upper extremity wasted and a loud systolic murmur heard above and below the clavicle and in the axilla. After resorting to various measures of treatment the patient consented to operation. After making a vertical incision at the outer edge of the sternomastoid, and a horizontal incision along the clavicle, with careful manipulation a large aneurismal tumor was seen occupying the entire third stage of the artery. The extreme jugular vein was lying at the outside of the subclavian triangle, and the phrenic nerve in its normal position ; the cords of the brachial plexus were not seen. An aneurismal needle was then passed through an opening in the sheath of the artery, around the vessel ; the ligature being composed of ox-peritoneum, aseptic. The loop being divided, the ligature on the side next the heart was tied by the first hitch of a reef-knot, the artery grooving like a director, and the internal coats being merely approximated. The second ligature was applied in the same manner, the four ends beings drawn finally as a single ligature, tieing the second hitch of the reef-knot. The long ends were cut off close to the stay-knot, completing the stay-knot of Ballance. After the first half hitch was tied pulsation in the tumor had gone, and the aneurism ceased to pulsate. The patient recovered

perfect health, his left arm becoming as strong and muscular as before the infliction of the wounds. The operation was originally practiced by Dupuytren in 1891.—*American Medico-Surgical Bulletin*, August 10, 1898.

CRANIOTOMY FOR MICROCEPHALIC IDIOCY.

S. M. Blanc (*Lyons Méd.*, Vol. LXXXV, p. 561) concludes that the operation is not a dangerous one and is, moreover, simple. The results, however, are more apparent than real, since microcephaly is due in all probability to an arrest of cerebral development at the fourth month of intra-uterine development, and that little would be expected for an operation on the bones after birth. In post-embryonic cases only could one hope for any actual benefit. In his experience of seven cases there was but little temporary improvement and no lasting help.— *American Medico-Surgical Bulletin*, Aug. 10, 1898.

A CASE OF RAPIDLY FATAL ACUTE OSTEOMYELITIS.

By GEORGE S. BROWN, M.D.,
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E.O., a girl, 6 years old, was brought to the hospital at 8 p.m., June 7, screaming with pain whenever she was moved, and particularly when her right arm was touched. The history elicited at this time was that she had received a blow on the right shoulder on June 3, and that on June 4 the pain and fever began. She was in a semi-conscious condition with pupils minutely contracted, conditions thought to be dependent on the opiates that had been given. Chloroform was administered and the painful arm, which was slightly swollen, was examined for fracture ; nothing was found, and the child was ordered to bed with cold applications to the arm and morphine to be given as required. At 4 a.m. I was called, and found her with a temperature of 102.8° and still crying with pain. The report was that she had had four hypodermics of morphine (two of gr. $\frac{1}{12}$ and two of gr. $\frac{1}{8}$), but, except for a very short time after each, she had not ceased to cry, emitting a bird-like cry of intense agony with every expiration. The mental condition was now clearly seen to be due to the profound sepsis, and the diagnosis of acute osteomyelitis was made. At 9 a.m. an incision was made over and parallel with the fibres of the deltoid muscle, and about half an ounce of pus was let out from under the periosteum. The child slept quietly for 4 hours after this, but the temperature and pulse were not improved in the

slightest degree. At 1 p.m. she was again screaming with pain in the same monotonous voice with every expiration, but was in every other way apparently unconscious. At 1.30 p.m. the dressing was removed. A hole was drilled in the shaft of the bone an inch below the epiphysis. As pus came from this also, a free opening was made in the shaft. The wound was next enlarged upward and downward and the periosteum was found to be fast separating from the bone. Hot, wet dressings were kept constantly applied, but the temperature and pulse kept steadily up, though the temperature could be brought down 1° or 2° by a cold bath. The mental condition and the screaming remained the same. At 2 a.m., on June 9, the wound was dressed and then drained much better, so that the temperature was then somewhat lower (between 102° and 103°) for the next 10 hours. All day the wound drained well, and there were some periods of rest of an hour or so, but otherwise the symptoms of most malignant sepsis were unchanged. All these gradually grew worse again. After another very bad night, and in the presence of a condition just about hopeless, on the morning of June 10, I again explored the wound. Following the disease I found the periosteum entirely separated from the bone. My incision now extended from the upper to the lower epiphysis on the back of the arm, bringing over the musculo-spiral nerve. The upper and lower epiphyses were cut through with bone-forceps and the loose shaft slipped out from under the musculo-spiral nerve. Much to my surprise, after I had done this, I found the shoulder-joint and elbow-joint full of pus. Examining further I found the wrist and ankle of the same side also inflamed. Touching the ankle would cause pain even when the child was so much under the influence of chloroform as not to feel the operation on the arm.

This pyemic invasion of the joints was something I had not heard of before in connection with osteomyelitis, and for that reason I overlooked it. I have no doubt now the last accession of the symptoms was caused by metastasis to the joints more than to the trouble in the arm, which was freely draining. The child died 6 hours later.

Cultures and cover-slip preparations from the pus evacuated at the first operation from under the periosteum, as well as that coming from the drill-hole in the bone, gave pure cultures of a staphylococcus that in the culture-tube proved to be the pyogenes aureus.

The brain-symptoms were so pronounced that for a while it seemed that a meningitis was present also. Although no autopsy was allowed, and notwithstand-

ing the metastasis to the joints, I am inclined to believe that the brain condition was due entirely to the toxemia.

Children often become unconscious under very mild septic conditions, and this case was one of a severity rarely met with. It is the only case of sepsis that I have seen out of about 40 treated similarly in which large subcutaneous infusions of salt solution (400, 500, and 600 cu. cm. in this case) had no effect whatever on the pulse, temperature or other symptoms. It is very probable, however, had an autopsy been performed, that we would have found infection of all the fluids of the body.

I find that the text-books mention such cases as this as being rare. I publish this for that reason, and because it may assist some one to recognize such a condition in time to do something for it. Operation on the first or second day might have saved this child ; though even then, in the hands of one who had not had such an experience before, the chances are that it would not have been radical enough.—*The Philadelphia Medical Journal*, August 13, 1898.

THE ANATOMY AND SURGERY OF THE CHINESE.

Dr. J. J. Matignon (*Archives Cliniques de Bordeaux*, November, 1897), after three years' sojourn in Pekin, says that a study of Chinese medicine convinces one that China is the paradise of routine. The medicine of the Chinese is less advanced, less intelligent and less scientific than that of Hippocrates. Medical literature is rich ; there are volumes remarkable for their size as well as for their number, but they are entirely lacking in originality. They are simply commentaries on the old masters who were contemporaneous with Machaon and Podaliere, who cared for the wounded after the Trojan war. All races, even savages, get some notion of medicine from the experiences of previous generations and the observations of morbid phenomena, but the Chinese are no further advanced than the most primitive people. They are superficial observers, and have made medicine a speculative science without the solid basis of observation of vital processes. The object of most authors has been to give their theories a mysteriously obscure character, for the Chinese think that the more shadowy and more incomprehensible the idea the more it is worthy of admiration. The Chinese physician never makes any dissections ; all that he knows of anatomy is learned from charts more or less fantastically produced, in which nerves, tendons, veins and arteries are confounded. The head is a solid bone.

Between the arm and the forearm there is a kind of patella. The small intestines communicate with the heart. The colon, which has six circumvolutions, opens into the lungs. They have very peculiar ideas in regard to the functions of the heart, brain, kidney and liver. The heart is the ruler of the body. Ideas of pleasure have their origin in the pit of the stomach. The soul has its seat in the liver, and from this organ emanate noble and generous sentiments. The gall bladder is the receptacle of courage, and the subject is timid or warlike according to its seat. They find sixty-four kinds of pulse in the same subject at the same time. They do not know that the veins have valves. Their histological notions are as follows: The body is composed of five elements—fire, water, metal, wood, and earth—which are in exact harmony with five plants, five tastes, five colors, five metals, and five solid viscera. Disease results from a disturbance of this harmony, which no one but a Chinese has yet been able to perceive. Happily for the Chinese, they have a horror of surgery; it is certainly a fortunate thing so long as their knowledge of anatomy is so limited. Fear of the bistoury is not the result of fear of pain, but of certain notions in regard to filial piety. Any wound of the body is considered an insult to filial piety. The Chinese seldom submit voluntarily to an operation, and when they do they keep the tumors or members that have been removed with the same pious care that eunuchs preserve their sexual organs in a bottle, so that, being buried with them, they may present themselves intact in the next world. The Chinese physician does not operate in the modern acceptation of the term. He really limits himself to the opening of an abscess. The chiropodist is much better equipped than the surgeon. All the instruments known number thirty-six. An insufflation tube for medicated powders is much used, especially in diphtheria. It is of iron and about eighteen centimetres in length. Lancing is very popular, and is employed in fractures, constipation, cholera and ophthalmia. A Chinaman piques himself on the number of lancings that he has undergone. There is, in the Imperial College of Medicine, a manikin of bronze, bearing a very large number of punctures corresponding to the lancing practiced on the living subject. At examination time this manikin is covered with paper, and the candidate for a degree is supposed to have a sufficient knowledge of the topography of all these orifices to introduce his lance through the paper without the least hesitation into the orifice corresponding to the disease upon which he has been interrogated. Nothing is known of speculums, forceps or urethral catheters. Massage has been understood by the Chinese

since its earliest antiquity. It consists of superficial or profound friction with the hand or a piece of money. In the method called "loung fou," they use hammering of the muscle and the bone by the use of a small wooden mallet.—*Medical Record*, March 26, 1898.

OBSTETRICS.

IN CHARGE OF

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Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

PUERPERAL SEPSIS.

Munde: Address before the Am. Gyn. Soc. '88. He says:—"With the comprehension that the old-time 'puerperal fever' was nothing less than septicemia, and differed in no sense from septic infection from wounds in other parts of the body, an immense advance was made in the understanding of the pathology, diagnosis and treatment of this dreadful disease." There are recognized three forms of puerperal sepsis. First, sapremia, or the variety in which the septic focus remains localized, and the microbe or germ infection, the staphylococcus, does not enter the general circulation. This form produces its systemic results, not through transmigration of its germs into the general system, but through the local irritation which causes a general elevation of temperature and pulse, precisely as a local inflammation or an abscess in any part of the body may do. Second, septicemia, in which the septic germs (streptococci) find their way into the general system, and by invading the blood produce general and systemic infection. While in the sapremic form the products of decomposition are usually putrid and their odor is exceedingly characteristic and offensive, in septicemia there ordinarily is no distinctive odor, and not necessarily any peculiar pathognomonic discharge from the genital organs. Third, pyemia, or the variety of septicemia in which deposits of streptococci take place in different distant portions of the body and there produce decomposition and abscesses. The first two varieties, sapremia and septicemia, are now-a-days by far the most common, particularly sapremia, while pyemia is comparatively rare at present, and he does not recollect having seen more than two or three cases within the last ten years,—the reason being probably, the septic condition being more quickly recognized and more energetically treated. The sources of infection may begin at a very early period of preg-

nancy—a woman who is aborting, or has aborted, being considered exactly in the same danger as a woman at term. A number of other conditions, such as inflammation of the pelvic cellular tissue of the peritoneum, etc., etc., are mentioned as producing fever in the puerpur. The sources of infection are decidedly more positive and obvious. He does not go so far as some who state in every case of puerperal sepsis that the infection has been carried by the attendants, although undoubtedly true in a large number of cases. He believes, besides the attendants, that septic germs may be sucked into the gaping vagina during change of position of the patient, or the retention of decomposed lochia in the uterine cavity by a sharply antiflexed uterus, is not an uncommon cause of rapid and unexpected septic absorption. The prophylaxis of puerperal sepsis is regulated by the prevention and the removal of the various causes of infection. In cases of gonorrhoeal or acrid leucorrhoeal discharges an effort should be made by means of frequent bi-chloride douches to cure this source of infection. He does not believe that it produces a true puerperal sepsis, although it may produce an acute salpingitis and pyosalpinx. An important element of prophylaxis against puerperal sepsis is the thorough emptying of the uterus of placenta membranes and coagula, and the maintenance of as thorough contraction of uterus as is possible by friction, ice, ergot, until such contraction is permanent. He does not hesitate, if necessary, to introduce his hand into the uterus to clear it out, rather than take chances of secundines or coagula remaining within. The diagnosis of puerperal sepsis is not difficult. Chill, followed by rapid rise of temperature, usually within three or four days after the confinement; rapid pulse, running up in severe cases to 140 or 150; repeated chills; temperature varying from 102 to 105 F.; occasional remissions, but scarcely ever falling to 100 F.; tongue coated, in very bad cases furred, brown and dry. The old theory of so-called "milk-fever" is exploded as a reason for prolonged elevation of temperature. Occasionally, when the infection has been gradual, there may be a high degree of sepsis, with little or no elevation of temperature; the rapid weak pulse, history of the case, absence of marked anemia and other causes for a rapid pulse would indicate sepsis. There may or may not be an offensive vaginal discharge. In cases where there is no odor to the discharge, only high temperature and pulse indicating the infection, the prognosis is most unfavorable. He recommends a digital examination, and, if necessary, a specular examination to be made in these cases of sepsis. The first indication for treatment is the removal of all foreign substances from the endometrium,

which may be the source of infection, either with the finger or long blunt curette. When the uterine cavity has been thoroughly emptied, irrigate with a mild solution of permang. potass. or a ten per cent. solution of chloride of zinc, or with Labarraque's solution, or, if the foreign bodies removed are offensive, with Marchand's solution of peroxide of hydrogen diluted one-half. He confesses that the mild solution of permanganate of potassium answers his opinion equally as well as any of the others, with the exception of the peroxide of hydrogen. He very seldom employs intrauterine irrigations of bichloride of mercury, and never stronger than one in ten-thousand, because he fears the systemic absorption of the drug and its consequent bad effects. Iodoform does not do any particular good. He says : "I have seen good from packing the endometrium with iodoform or sterilized gauze to bring about a contraction, the uterus being empty." In very bad cases of septic endometritis with a great deal of inflammatory hypertrophy of the uterine wall, he does not use a curette either sharp or dull, as it removes the tissues, which have already undergone inflammatory obliteration of their absorbent vessels, and the curette simply lays open fresh channels for infection. In such cases apply to the endometrium either a solution of chloride of zinc (20 to 30 per cent.) or pure tincture of iodine, or iodized phenol, through a speculum, wash and pack with iodoform gauze, which may be left for 48 hours or longer, provided symptoms (chill or temperature) do not call for its earlier removal. After such strong cauterization intra-uterine irrigation will be needed for some time. The method recently recommended by Carossa, of introducing a large drainage tube to the fundus, and then packing around the tube with sterilized gauze saturated with alcohol of 20 per cent. strength, has been highly recommended by Ill and others. If the uterine cavity is empty, and there is nothing in it to produce sepsis, if the signs of sepsis be present, there is no use in giving intra-uterine irrigations. Infected vaginal or perineal wounds should be touched with a saturated solution of permang. pot. or a 25 per cent. solution of chloride of zinc. Uterine vaginal drainage should be maintained by thin strips of iodoform gauze gently passed through the internal os as required. The medicinal treatment of puerperal sepsis is not satisfactory. It is simply a question as to which holds out the longest, the patient or the disease. If we can keep the patient alive by means of stimulants—that is, alcohol, caffein, strychnine and nourishing food—until nature has thrown off the septic germs, we gain the victory. If her stomach gives out, the disease wins. He has no faith whatever in quinine as a reducer of temperature, and as for its

action on septic germs it is useless. The reduction of temperature by means of the cold-tar derivatives, as antipyrin, is only temporary. The objection to them is that they depress the heart and mask the fever. However, phenacetene may be given in from three to five grain doses, combined with caffein, carefully watching it. It tends to render the patient more comfortable. The use of saline laxatives, as advocated many years ago by Seyfert, of Prage, is simply a matter of historic interest. Ergot is useful if the stomach will stand it. The large ice-bag, or ice water coil, frequent sponging with cold water, or cold water and alcohol, or even the bath reduced to a temperature of 70 deg. F., are all potent factors in the reduction of temperature. In conclusion, he says of serum therapy, that is, by hypodermatic injections of the antistreptococcic serum, he has had an experience in three desperate cases, from three to six injections of 10 C. C. of serum were injected at intervals of from four to twelve hours and all three cases recovered. In cases going from bad to worse, he unhesitatingly employs the serum injections, on account of the results already seen. Intravenous saline infusions might be employed to prolong life in desperate septic cases. Panhysterectomy per vaginam for the removal of septic foci invading the pelvic cavity, the appendages and more or less the uterus, has its distinct place in pelvic surgery, but it is well not to be too hasty in the performance of this mutilating operation. —*Jour. of Obstet.*

"Bacteria of the Vagina and Their Practical Significance, Based upon the Examination of the Vaginal Secretion of One Hundred Pregnant Women," was the title of a paper read at the American Gynecological Society by Dr. J. Whitridge Williams, Instructor in Obstetrics in the Medical Department of Johns Hopkins University, Baltimore. As a result of his investigations in this direction, the author presented the following conclusions: (1) He agrees with Kronig that the vaginal secretion does not contain either pathogenic streptococci nor staphylococci aureus. Therefore, douching it is not only unnecessary but positively injurious. (2) The discrepancy in the results of various authorities is ascribed to differences in technic in obtaining the secretion for examination. (3) As the normal vagina does not contain pathogenic streptococci nor staphylococci aureus, auto-infection is impossible. (4) If these germs are found in the vagina during the puerperium, they have been introduced from without. (5) If the vagina contained streptococci as frequently as stated by Walthard, Valile and Kottman, vaginal exam-

ination with the sterile finger would be very dangerous, which is not the case. (6) It is possible that in rare instances the vagina contains bacteria which may give rise to sapremia and putrefactive endometritis by auto-infection. Such cases, however, are usually mild and do not lead to death. (7) Death from puerperal infection is due to infection from without, and is usually caused by neglect of antiseptic precautions on the part of the physician. In all cases examined, save one, the bacilli found in the uterus were different from those found in the vagina. In one case, in which the temperature was 102.6° F., a short, thick bacillus was found in the vagina before labor and in the uterus after labor, so, possibly, this was a case of auto-infection.

PREGNANCY AFTER DOUBLE OOPHORECTOMY.

Dr. Sherwood-Dunn (*Annals of Gynæcology and Pædiatry*, August) relates the following remarkable case. He says that he was consulted about three years since by an unmarried woman of thirty. She had suffered for twelve years from unceasing pain and discomfort in the pelvis. She had been in the hands of some of the leading neurologists and spent periods of several months in some of our most noted sanitariums. Medication, electricity, massage, hydrotherapy, rest-cure, travel—all had been tried with varying success. She had not been free from the feeling of malaise and lack of energy, so constantly present in neurasthenics, except at periods following favorable treatment, all these years. She had local areas of hyperæsthesia and periods of excessive irritability, which during two years previous to his seeing her excited hysterical seizures. He resected two large œdematous ovaries for her; she married, and in a letter written this year she informs him that *she is the mother of a fine boy*, has gained twenty-two pounds in weight, and has enjoyed perfect health ever since the operation. This can scarcely be another case of "castrating the wrong man," with the sexes reversed.

A BREEDING TIME FOR WOMEN.

According to the *Northwestern Lancet* for August 1st, Eskino women do not breed during the winter months, and their menstruation ceases at that time. The natives of Queensland are also said to have a special breeding season, though menstruation with them continues throughout the year.

Medical Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

THIRTY-FIRST ANNUAL CONVENTION, HELD AT QUEBEC, AUGUST 17, 1898.

The recent meeting at Quebec was successful in every respect. Although the number attending was small as representing the profession of the Dominion, some very interesting papers were read and important business transacted. The proceedings were well reported by the *Morning Chronicle*, to which we are indebted for the report of proceedings. The meeting was held in the Convocation Hall of Laval University, under the Chairmanship of the President, Dr. J. M. Beausoleil, and was attended by a great many highly prominent physicians from Quebec, Ontario, Nova Scotia, Prince Edward Island and the United States. In the hall which adjoins the Convocation Hall there was an exhibition of surgeons' and physicians' appliances and requisites, and there was also quite a large pathological exhibition.

In the Convocation Hall, there was a very pretty display of flowers, palms and other decorations, including festoons of evergreen, which gave evidence of great taste, and reflected much credit upon the gardeners of the Sacré Cœur Hospital of St. Sauveur. In the gallery, too, there was stationed an orchestra, which from time to time discoursed sweet music. Altogether, every arrangement which could possibly be made to promote the pleasure and comfort of the delegates was assiduously looked after by the local Committee, which was constituted as follows :—Dr. C. S. Parke, Chairman ; Dr. Marois, Secretary ; Drs. Ahern, Chs. Verge, A. G. Belleau, E. Turcot, Robitaille, C. C. Sewell.

Those who occupied seats on the platform in addition to President were the following :—Vice and Past Presidents and guests :—Doctors Roddick, Montreal; J. M. Mullen, Hamilton ; MacNeill, Stanley Bridge, Prince Edward Island ; C. Parke, Quebec ; Thorburn, Toronto ; Gilvey and Valentine, New York ; E. P. Foster, New York ; La Place, Philadelphia ; Gibson, President Ontario Medical Association. The other members present were :—Doctors M. Ahern, Quebec ; Marcil, St. Eustache ; Marois, Quebec ; Robitaille, Quebec ; H. Cholette, Ste. Justine de Newton, J. George Adami, Montreal ; Chas. Verge, Quebec ; W. W. Dickson, Pembroke ; E. Gauthier, Edwin Turcot, Quebec ; H. Neilson, Kingston ; Chas. Smith, Orangeville, Ont. ; C. R. Paquin, Quebec ; Chas. O'Reilly, Toronto ; H. Beaumont Small, Ottawa ; Chas. R. Dickson, Toronto ; Ed. LeBel, Quebec ; Drum, Quebec ; G. G. Turcot, Quebec ; A. G. Belleau, Quebec ; W. C. Verge, Quebec ; Jas. Bell, Montreal ; A. R. Marsolais, Montreal ; R. C. Blair, Quebec ; W. H.

Klock, Ottawa; Thos. D. Reed, Montreal; H. R. Ross, Quebec; G. H. Parke, Quebec; C. S. Parke, W. J. Gibson, Belleville, Ont.; Wyatt Johnston, Montreal; J. C. S. Gauthier, Upton; F. N. G. Starr, Toronto; George Cloutier, St. George, Beauce; Alfred Morisset, St. Henedine, Dorchester; T. P. Bolduc, Montmorency Falls; W. S. Muir, Truro, N. S.; P. H. Bedard, Quebec; W. A. Young, Toronto; M. D. Brochu, Quebec; M. Brophy, St. Foye, Quebec; Arthur Lavoie, Sillery; G. Sterling Ryerson, Toronto; L. J. A. Simard, Quebec; Jas. M. MacCallum, Toronto; Frs. de Martigny, Montreal; N. Worthington, Sherbrooke; Arthur Simard, Quebec; J. Arthur Williams, Ingersoll, Ont.; A. J. Nicholl, Montreal; J. A. N. Chabot, Ste. Claire, Dorchester; S. Grondin, Quebec; P. C. Coote, Quebec; J. A. Langis, Petit Rocher, N.B.; C. O. Samson, Quebec; Thos. T. Nesbitt, St. Hilarion, Charlevoix.

ADDRESSES OF WELCOME.

When the session opened, Dr. Parke, Chairman of the local Committee, made a short and informal, but appropriate, address of welcome to the delegates. He said that he had hoped that His Worship the Hon. S. N. Parent, Mayor of the city, would have been here to welcome them, but he had been called away by departmental business. However, he cordially greeted them all, and hoped that they would derive much pleasure and instruction from their visit to Quebec. In such time as they could spare from their deliberations, the local physicians would have the greatest pleasure in showing the visitors the glories of Quebec, and sights of which few cities in the world can boast. The noble river that flowed at his feet would also, he said, be called upon to contribute to the entertainment, and an opportunity would be found to show those present the famous Falls of Montmorency, etc. He added that though, as he had remarked, the members would not have the pleasure of being welcomed by His Worship the Mayor, still their loss was not so great as it might have been since Alderman Martin Foley was present to replace him. In conclusion, he thanked his audience for the very attentive hearing they had given him, and once more bid them welcome.

Alderman Foley then in the name of the people offered to the delegates the following

CIVIC ADDRESS OF WELCOME.

To the President, Officers and Members of The Canadian Medical Association:

LADIES AND GENTLEMEN,—In the absence of His Worship the Mayor, who has been called outside of our limits on an official visit as a Minister of the Crown, it is my pleasant duty as Pro-Mayor to welcome you and to tender you the hospitalities of the City of Quebec.

Our people fully appreciate the priceless value of gatherings like this one, composed of men who represent the progressive march and the scientific attainments of the medical profession of Canada.

You are welcome in our midst, and more especially to this ancient seat of learning founded by Monseigneur de Laval, and which has made Quebec famous as the pioneer of higher education in the New World.

We know that your learned deliberations will have beneficial results for the progress of science and the relief of suffering humanity.

I am sure I am voicing the sentiments of our population when I express the hope that the name of Quebec will be inscribed on your list and on the list of all kinds of Associations similar to yours as the favorite spot where assemblies like this to be held in the future will be pleased to meet; a centre of attraction to which everybody should turn, and which offers to the scientist worried by the labour and fatigue of deep research and unceasing mental efforts the refreshing breezes of our mighty river and the unrivalled scenery which captures the eye from the heights of the historical cliff of Quebec.

Gentlemen, you have our best wishes for the success of your convention.

We hope you will make it last as long as possible, for we are sure that your clients have agreed to give you a prolonged furlough and that Providence will see that your absence is not detrimental to their health.

Dr. M. J. Ahern, representing the Medical Faculty of Laval University, then presented its greetings in the following happy retrospective remarks:—

"The few words I have to say to you have been rather pretentiously styled an address in this programmme—an address of which I may say with Goldsmith, that 'If you find it wondrous short it shall not hold you long.' Mgr. Laflamme, the Rector of the University, was to have met you here to-day, but he is unavoidably absent, so that, in his name and in that of Laval University of Quebec, ever ready to extend the right hand of fellowship to all seekers after truth, I have the honor and the pleasure of bidding you a hearty welcome and of offering to you the freedom of the museum and all the facilities at our command for the fulfillment of those important duties you have assembled here to perform. Nor is this the first time that these walls have re-echoed the scientific discussion of this Association. One memorable morning, 31 years ago, when the Confederation, which binds together as one the different Provinces which comprise this great Dominion of ours, was but a few days old, there met in this building representative medical men from all parts of the country, who did not separate until they had founded the Association which I have now the pleasure of addressing. How well these men did their work and what life they infused into their offspring is shown by the vigorous condition of this Society after an existence of over one quarter of a century. Some of those men are here to-day. Once more, gentlemen, Laval University bids you a hearty welcome, and hopes that your stay here will conduce to our improvement and may also increase your happiness."

After these addresses, which were briefly and appropriately acknowledged by the President, the delegates adjourned to the various

museums, which they visited and highly admired, and then all went downstairs to the University gardens, where they were photographed in a group by Mr. Livernois. They then returned to the main hall, where, after some routine business, including the reception of visitors, election of members, etc., the President, J. M. Beausoleil, M.D., Officer of the Academy, delivered the President's address. See page 421.

Upon its conclusion Dr. Roddick rose and said in his address, the President, whom he sincerely thanked, had touched upon a subject which he himself had long advocated,—a general examination and registration common to all the Provinces. He was pleased to-day to find that those whose opposition he had most feared—the men from Ontario—entirely favored the scheme. Accordingly, he hoped at no distant date to see matters so arranged that a man holding a diploma in any one part of Canada might practice in any other part of it, or, in fact, anywhere in the British Empire. Such a consummation would mark a new era in the history of Canada, especially as regards her doctors. The Association had been born in Quebec and had since done great things. He hoped this new idea which had first taken root and been seriously considered in Quebec would likewise flourish as had the Association, and that this great project might speedily come into operation. He then moved a hearty vote of thanks to the worthy President, which being put to the meeting by Dr. Thornburn, of Toronto, was carried unanimously.

The first paper read was one by Dr. A. Rosebrugh, of Toronto, on "The Duty of the Medical Profession in the Question of the Treatment of Inebriates." It was read by title by Dr. F. N. G. Small, of Toronto, the energetic Secretary of the Association. See page 429.

The reading of this treatise was greeted with loud applause, and the following Committee were named to study and report upon the matter:—Drs. Thorburn, Muir and J. George Adami.

The next paper taken up was one by Dr. G. Sterling Ryerson, of Toronto, on Monocular Diplopia. This difficult optical subject was handled by the author in a masterly and learned manner, which excited general admiration, and it was universally agreed that, as stated by Dr. Ryerson, the matter was one to which by far too little care and attention were devoted.

Hon. Dr. Marcil followed with a paper on "Septic Peritonitis, Consecutive to Appendicitis, and its Surgical Treatment." In his treatise Dr. Marcil gave a most interesting description of the treatment of the disease, consisting of an operation and washing the peritoneum. His opening remarks showed that the operation was first practiced in 1893 by Dr. Berger, of Paris, but unsuccessfully However, he fully succeeded in 1894. In 1893, Dr. Reischel, of Germany, had declared the operation was useless. In 1897, Dr. McCosh, of New York, successfully performed the operation, but in August, 1896, Dr. Marcil himself successfully performed the operation on a young man in Terrebonne, and so seems to have fairly earned the credit of having himself performed the first successful operation of the kind on the continent of America.

Dr. Ferd. C. Valentine, of New York, subsequently gave a

most interesting and instructive talk on the subject of the Genito-Urinary instruments required by the general practitioner, and illustrated it by a variety of catheters and other apparatus. Dr. Valentine referred in the strongest terms to the fact that most doctors shrink from the expense necessitated by the purchase of the best instruments to treat the dreadful diseases of the organs referred to, and condemned such parsimony in the very strongest terms. If it were not for this, many who are to-day suffering the most horrible torments might be cured, and he hoped that the matter was more intelligently treated here than on the other side of the line.

Dr. Smith, of Orangeville, exhibited a number of peculiar cases met with in practice of Gall Stones, Vermiform, Appendix, Cancer, Tumour, etc., and made a few general remarks concerning them.

One of the most interesting papers of the afternoon was read by Dr. Thorburn, of Toronto, who dealt with "The Physician and Life Insurance." In the course of his remarks Dr. Thorburn mentioned that the risks at present held in Canada by British and Canadian Companies is $344,314,448, and that the total amount held in the United States is $5,183,694,250. The very fact that there was so much money locked up in this business shows how much depends upon the good judgment of the profession and how much reliance is placed in it. A number of other statistics were also given, but we cannot go into them at greater length. However, in connection with the subject, Dr. Thorburn very vigorously protested against physicians permitting either Insurance Companies or candidates to influence them in their examinations and reports. His appeal was almost purely one for thoroughness and faithfulness in examination, and he indignantly scored those who so often give the patient a thump on the back and another on the chest and then let them go.

Dr. Mullin made some remarks very much in the same sense.

Dr. Muir also added a vigorous protest *re* those doctors who make unfair examinations and who treat men banded together in associations at ridiculously low fees.

Dr. Dickson advocated the establishment of a standard and uniform scale of fees for the government of doctors in such cases.

Dr. Gauthier made an extremely warm attack on those doctors who indulge in lodge practice, and claimed that they were prostituting the profession by accepting fees of $1 and even 50 cents for examinations. Some of them, however, even did worse than that, as there was for instance one society he could name in which the candidate did not have to pay if not accepted. He wanted to know, too, how such things could be stopped when the Presidents of colleges and medical councils acted in this very manner, and threw out some very broad hints which created quite a sensation. He was in favour of a minimum fee of say £5 being established, even if the insurance applied for be only $1,000.

Dr. Valentine apologized for having, though a stranger, interfered in the discussion, but said that he would like to see a more faithful system of examination enforced. There should be a more rigid examination as to gonorrhœa and other diseases of the genito-urinary organs. In Dr. Valentine's opinion 80 per cent. of children who lose their eye-sight after birth, and a very large proportion of

deaths are due to such diseases. In cases, too, of suicide, etc., he would like to see coroners instructed to examine the genito-urinary organs of the victims, for he was confident that therein the cause would generally be found. In fact, so strongly was he convinced of this fact that he had some years ago read, before the Anglo-American Medical Society at Berlin, a paper on the "Melancholia of Gonorrhœa," and of those who then strongly ridiculed him three had since published papers on the same subject.

Dr. Thorburn said that some means of stamping out cheap doctors must be found. However, with regard to Dr. Valentine's remarks, he must say that Canadians do not appear to be nearly so immoral and subject to venereal diseases as those to whom the latter gentleman referred. He was quite confident that gonorrhœa was not by any means the disease most prevalent among Canadians, and that 80 per cent. of premature deaths could not be traced to it in Canada, as they could be in New York, according to Dr. Valentine.

Before the adjournment the election of the Nominating Committee was proceeded with and resulted as follows:—Dr. Muir, Truro, N.S.; Dr. McNeil, P.E.I.; Longis, New Brunswick; Roddick, Montreal; Bell, Montreal; Small, Ottawa; Ryerson, Toronto; Williams, Ingersoll, Ont.; C. S. Parke, Quebec; Thorburn, Toronto; Marcil, St. Eustache; Myers, Toronto; Wyatt Johnston, Montreal; Dickson, Pembroke, Ont.; Worthington, Sherbrooke.

On the previous evening there was a very pleasant promenade concert at Victoria Park, to which the delegates were invited, and at which all fully enjoyed themselves.

The second day's programme was as follows :—

9.30 a.m.—Reading of papers—Goitre—C. R. Dickson, Toronto.

Traumatic rupture of the bile duct, followed by operation. Exhibition of patient—R. H. Garratt, Kingston.

Case of fracture of pelvis, with rupture of bladder, operation, recovery—R. A. H. Mackeen, Glace Bay.

On the Recording of Medical Cases, C. F. MARTIN, Montreal.

A series of cases of Calculous Obstruction of the common bile duct, treated by incision of the duct and removal of the stones—Jas. Bell, Montreal.

11 a.m.—Excursion to Groose Isle Quarantine Station.

4 p.m.—Session on steamer :—

Foreign bodies in the larynx—Hubert D. Hamilton, Montreal.

A case of bicornuate uterus, mistaken for ectopic gestation; a case of strangulated umbilical hernia—W. J. Gibson, Belleville.

Neurasthenia—D. Campbell Myers, Toronto.

Laryngeal Diphtheria, with special reference to cases requiring a choice between tracheotomy and intubation—A. Gandier, Sherbrooke.

MORNING SESSION.

On Thursday the meeting opened at 9.45 a.m. sharp. The Secretary first read the minutes, after which the regular business was proceeded with.

The following members were added to the attendance roll:—Hon. Dr. Guerin, M.L.A., Montreal; Drs. Frank R. Foster, New York; Henry P. Wright, Ottawa; Pierre Ulderic, Princeville; E. McLaughlin, Morrisburg; Edward Marcotte, St. Basile, Portneuf; A. DeMartigny, Montreal; J. Dufresne, Deschambault; Charles F. Martin, Montreal; C. W. Wilson, Montreal; A. Gander Sherbrooke; H. A. Lafleur, Montreal; Sir William Hingston, Montreal.

The first paper read was one by Dr. James Bell, of Montreal. It was, of course, a purely technical one, of little interest to the general public, but valuable in a pathological sense to the profession, the subject being "A series of cases of calculous obstruction of the common bile duct, treated by incision of the duct and removal of the stones."

All those who were present, including the visitors, were loud in their praises of this paper. They also expressed their surprise at the large number of cases of this unusual condition observed in a city of the size of Montreal.

At 10.30 the members adjourned in order to take part in the excursion to the Quarantine Station, which left the Queen's Wharf at 11 a.m.

The trip to Grosse Isle was one of the most pleasant imaginable, and was participated in by fully 200 persons, including a large number of ladies, who lent color and brilliancy to the occasion. The steamer, too, was comfortable and roomy in the extreme, the *Aberdeen* having been courteously placed at the disposal of the Association by the Department of Marine and Fisheries. Commodore J. U. Gregory and Mr. O'Farrel accompanied the party, and did all in their power to promote the general enjoyment, while the members of the local committee were perfectly indefatigable.

At noon a splendid lunch was served on board the *Aberdeen* by Mr. Douglass, who was aided by Mrs. Douglass and a large staff of waiters. It is needless, after mentioning this fact, to state that the luncheon was as fine as anyone could ask for, and it was beautifully served.

Arrived at the Island, the visitors inspected the Quarantine Station from beginning to end, including the passengers' quarters, disinfecting and fumigating apparatus' laboratory, etc., and universally pronounced it equal to any on the continent, and a tribute to the skill and zeal of Dr. Montizambert and his able staff of assistants. The burying ground, too, in which 5,424 victims of the typhus fever plague of 1847 lie buried, was likewise visited, and was viewed with the greatest interest. Shortly before four o'clock the return journey was begun, and as the steamer left the Quaran, tine Station three hearty cheers were given for Dr. Montizambert-who, with Dr. Church, took the visitors in hand at the island. After a remarkably pleasant sail the *Aberdeen* returned to Quebec at 6.30 p.m.

On the return trip meetings of the Nomination Committee on International Registration were held, and they then finished their labors.

EVENING SITTING.

Amongst other papers read at the evening sitting was a most interesting one on the "Surgical Treatment of Empyema," by Dr. J. M. Elder, of Montreal. The doctor modestly declined to class his talk as a paper, saying that it was merely an opening of the discussion and grouping of heads upon which he desired to elicit debate and information. The discussion which followed was taken part in by Drs. Muir, Dickson, Hingston and Roddick. Dr. Muir preferred the use of a metal tube to a rubber one, and Dr. Roddick was of a similar opinion. Dr. Hingston believed in operating for chronic cases, and, speaking on the subject of washing out the cavity, said that he believed in the washing with sterilized water, or in some cases a mild solution of carbolic acid. Dr. Roddick described his success with the use of the aspirator for children.

Dr. W. H. Drummond read an exceedingly fine paper upon "The Pioneers of Medicine in Quebec," which displayed a vast amount of original historical research. It dealt with the early history of the profession in this country. See page 425.

ELECTION OF OFFICERS.

The Nominating Committee reported the following list of officers for the coming year, which was adopted:

President—Dr. Irving H. Cameron, Toronto.

Vice-Presidents—

Prince Edward Island—Dr. J. McLeod, Charlottetown.
Nova Scotia—Dr. Kirkpatrick, Halifax.
New Brunswick—Dr. L. N. Bourque, Moncton.
Quebec—Dr. Jas. Bell, Montreal.
Ontario—Dr. J. A. Williams, Ingersoll.
Manitoba—Dr. R. S. Thompson, Deloraine.
North West Territories—Dr. Lindsay, Calgary.
British Columbia—Dr. S. J. Tunstall, Vancouver.

General Secretary—F. N. G. Starr, Toronto.

Provincial Secretaries—

Prince Edward Island—Dr. S. K. Jenkins, Charlottetown.
Nova Scotia—Dr. W. G. Putnam, Yarmouth.
New Brunswick—Dr. T. D. Walker, St. John.
Quebec—Dr. Charles Marcil, Ste. Eustache.
Ontario—Dr. C. R. Dickson, Toronto.
Manitoba—Dr. George Chigan, Verden.
North West Territories—Dr. Lowe, Regina.
British Columbia—Dr. R. E. Walker, New Westminster.

Treasurer—Dr. H. B. Small, Ottawa.

Publishing Committee—Dr. A. D. Blackader, Montreal; Dr. J. L. Davidson, Dr. W. A. Young, Toronto; and the General Secretary and Treasurer.

By-laws—Drs. C. S. Parke, Wyatt Johnston, Jas. Bell, C. R. Dickson, G. S. Ryan, W. W. Dickson, M. Beausoleil, and the President and Secretary.

The next place of meeting is Toronto.

THIRD AND CLOSING SESSION.

By far the most important meeting of the Canadian Medical Association, so far as general work is concerned, was the closing session, which opened at 9.30 a.m. yesterday and closed shortly after noon. In this short time an enormous amount of work was achieved, and if all the important measures in which the first steps were then taken are pushed to their legitimate conclusion, the medical profession, and the public in general, will long have occasion to remember this conference just brought to a close.

The first business of the day was the exhibition by Dr. Laplace, of Philadelphia, of an ingenious instrument for the treatment of bowel wounds, or, to use the technical expression, for intestinal anastamosis. It was exhibited by its use on a chloroformed dog.

Dr. T. D. Reed, of Montreal, was then called upon for his remarks upon

THE BRITISH PHARMACOPŒIA.

He said that it was periodically revised, but that at the last revision in 1885 there were few changes. In that of 1898, however, 189 medicines are omitted, 80 new remedies are added and 180 changes are made. All of this necessitates the very greatest care and attention on the part of the practitioner; it is manifestly important that there should be absolute uniformity in the writing and filling of prescriptions. For this reason then the last corrections to the B. P. must be carefully studied, and it should be adopted as the absolute standard for the Dominion. Accordingly in view of all these considerations and the fact that no date has yet been settled for the coming into force of the new B. P., he moved:—

That, "whereas a revised edition of the British Pharmacopœia has been issued containing numerous and important changes, and whereas uncertainty exists as to the date when the British Pharmacopœia, 1898, is to be considered in force; *Resolved*, That the Canadian Medical Association, in annual meeting assembled, recommends that October 1, 1898, be taken as the date on and after which, in the absence of instructions otherwise, physicians' prescriptions should be compounded with the preparations of the British Pharmacopœia, 1898."

Dr. Roddick also spoke at some length on the matter, and read a communication from Great Britain on the subject, after which he announced his intention to move the appointment of a Committee to consider the matter.

Dr. Reed resuming said that, as this was a Canadian Association, it should be loyal to the British Pharmacopœia, and announced his willingness that such a Committee should be appointed. In some of the Provinces the B. P. was not universally followed, as in Ontario for instance, though it should be so.

Dr. H. B. Small, of Ottawa, said that the B. P. was official in Ontario unless otherwise ordered by the Council, and asked where and when it was not followed in Ontario.

Dr. Reed replied that one instance he had in mind occurred two or three years ago in Ottawa, which was in Ontario, and that

it took place in the Department which deals with the adulteration of food, etc. A number of tinctures were bought all over the Dominion to be tested, and, though they did not conform with the B. P., they were allowed to pass because they were up to the standard of the United States Pharmacopœia. Some time ago the sentiment in Montreal was tested by means of post card circulars, and 99 per cent. of the doctors who replied favored the B. P.

Dr. Beausoleil made a few remarks upon the importance of settling this subject, and hoped that no means of doing so would be neglected.

Dr. MacNeill said that the United States Pharmacopœia included all that was best in the British, French and German Pharmacopœia, and that it was very extensive and full of information. If the B. P. was to be taken as the standard, it should be consolidated, improved and extended.

Dr. Roddick moved the appointment of the following Committee to impress the matter upon the attention of the Federal authorities :—Drs. T. D. Reed and A. D. Blackader, Montreal; H. B. Small, Ottawa; Marois, Quebec; H. J. Cameron, F. N. G. Starr and J. A. McCallum, Toronto. This motion was also adopted.

The other very highly important matters which came before the meeting was the report of the Committee on

INTERPROVINCIAL REGISTRATION.

The report was highly favorable to the project in every respect, and not only was it so, but it suggested admirable bases for the rapprochment. See page 469.

The Committee who had the matter under advisement were : Dr. MacNeill (P.E.I.), chairman; Doctors Marcil, Chas. Parke, Marsolais, Roddick, (Quebec); Muir (Nova Scotia); Williams, Thorburn, Mullins, Wright (Ontario).

Dr. Ahern moved that the following Committee be named to continue the good work already begun :—Doctors MacNeill, P.E.I.; Muir, N.S.; Walker, N.B.; Marcil, Quebec; Bain, N.W.T., McKechnie, B.C.; Williams, Ontario. This resolution also acknowledged the Committee's services and was unanimously adopted without discussion.

Dr. Grondin moved that type-written copies of the report be sent to the Registrars of each Province to be laid before their Colleges, and that answers thereto be requested in order to feel the sentiment of the country on the subject.

The papers read at the meeting included "Sero-Therapy," by Dr. Ed. Laberge, Montreal; Laryngeal Diphtheria, by Dr. Gandier, Sherbrooke; A case of Strangulated Umbilical Hernia, Dr. Gibsone, Belleville; Neurasthenia, Dr. Meyers, Toronto; Goitre, Dr. Dickson, Toronto; Infection and Sero-Therapy, Dr. A. DeMartigny, Montreal.

A letter of congratulation to the Association and its President was read by Dr. F. X. DeMartigny, of Montreal, on behalf of Dr. Guepin and Dr. Loze, of Paris, and Dr. Roddick moved that it be suitably acknowledged.

Dr. F. X. DeMartigny also read some communications from Paris on Technical subjects.

The Auditors, Drs. Dickson and Marois, then reported on the Treasurer's books, showing that the balance from last year was $132, while the receipts this year were $156, making a total of $288.52, of which a balance of $62.40 still remains.

The thanks of the meeting were then unanimously tendered to Dr. Small, in recognition of the able manner in which he had, as treasurer, kept the books.

A vote of thanks was likewise passed to the doctors of Quebec, and especially the Local Committee for the handsome manner in which they had received the Convention.

Another very strongly-worded motion was also moved, seconded, and unanimously passed, expressing the physicians' high appreciation of their delightful trip to Grosse Isle, and their sense of its magnificent equipment. The mover, Dr. Meyers, of Toronto, dwelt upon the magnificent development made by the Station during the last 26 years, until it is now second to none, and embodied in his motion the enthusiastic sense of the meeting, that the Government should

RETAIN DR. MONTIZAMBERT

as their Superintendent of Quarantine. He said that almost all that had been done at Grosse Isle was due to Dr. Montizambert, and spoke briefly of his great scholarly attainments, and of the very high stand he took among medical scientists the world over. These remarks were applauded to the echo. Dr. Parke seconded the motion.

Dr. Dickson, of Toronto, moved that the thanks of the Association be tendered to the authorities of Laval University for the use of their splendid building and room.

Dr. Small moved that a vote of thanks be passed to the transportation companies who had carried the members at reduced fare, but suggested that some more convenient means of getting the reduction than the bothersome certificate system be sought for.

Dr. Mullen, of Toronto, moved that Dr. Beausoleil vacate the chair and that Dr. Roddick act as chairman.

He then proceeded to move a vote of thanks to the highly esteemed President for his efforts on behalf of the Association, which had so largely contributed towards the success of the meeting, one of the best that the Association had ever held. He could well remember that the first meeting of the Association, which he attended, was held at Niagara Falls, and was under the Presidency of a Quebec physician, the late Dr. Marsden. Since then he had had the pleasure of knowing many Presidents of the Association, and it was with pleasure that he remarked how prominent the men all had been. Having commenced under a Quebec President, it was gratifying to him to now attend, under a presiding officer taken from among the French-speaking brethren, one of the most delightful and most successful meetings that the Association had held since its foundation. The motion was warmly seconded by two or three gentlemen, and was then put to the house by Dr. Roddick,

who transferred the expression of the meeting's feelings to their object.

Dr. Beausoleil made a characteristically happy reply. After thanking the members for the honor they had done him, he addressed himself principally to his French-Canadian brethren, and showed them how foundationless was the assertion that the Society was an English one. This idea he desired to correct was all wrong, for the Society was essentially Canadian in fact as well as in name. French and English-speaking people must unite together, not necessarily in language but in the effort to promote the general good of the country. That the English-speaking members of the Association were willing to do their share and were eminently fair and just to their *confrères* was exemplified by the fact that in a Committee of 15, on which there were two French-speaking members, one had been elected President. At the Kingston meeting every honor that could be asked by the French-speaking members were accorded them, although they were practically alone, and though their countrymen were only one-fifth of the Dominion's population. Now, the French-Canadians must show by their efforts that they want to maintain Canada's reputation and to keep step with progress, and Quebec Province must realize that, though she has long had a tendency to do so, she must not bashfully lag behind the rest of the Dominion, even though she may very exclusively desire to retain some of her legitimate characteristics. Finally, he asked all the French-speaking *confrères* to rally to Toronto next August, and strongly urged them to busy themselves in securing new members for the Association.

Dr. Dickson, of Pembroke, in a few very neat remarks proposed a vote of thanks and the usual bonus to the Secretary, whom he eulogized in the warmest terms for his assiduous and painstaking though unassuming efforts on behalf of the Association. In fact, he attributed much of its success directly to Dr. Starr. In these remarks he was seconded by Drs. Muir, Small, Roddick, Beausoleil, MacNeill and others.

Dr. Starr then read a number of communications, including an invitation to the C. M. A. to send a delegate next month to the annual meeting of the Electro-Therapeutic Association which assembles in Buffalo.

After the consideration of other routine matters three hearty cheers were called for and heartily given for Dr. Parke, President of the local Committee, who so admirably arranged everything for the Association, and the gathering broke up to assemble next August in Toronto.

In the afternoon the members were entertained to a very pleasant drive to the Falls of Montmorency by their *confrères* of Quebec.

THE

CANADA MEDICAL RECORD

PUBLISHED MONTHLY.

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

INTER-PROVINCIAL REGISTRATION.

The movement in favor of reciprocity throughout the Dominion in regard to license to practice medicine is gradually approaching that stage when the last vestiges of opposition are disappearing, and local selfish interests are receding in favor of an arrangement which is fraught with greater benefit to the profession of the Dominion. The report adopted a year ago was approved of by all the provinces except Ontario, where a majority still hold out for examination by their own board for all who wish to practice in the province. As Ontario had a strong representation on the Committee, it is to be hoped that the present report, which was unanimously adopted at the recent meeting of the Canadian Medical Association at Quebec, will be found acceptable by all the provinces. Until this has been done, no further progress can be made towards securing a Dominion Board of Registration, which will place us in a much more desirable position here, and doubtless be immediately preliminary to the recognition of our right to practice in all British countries. The new arrangement proposed is more in accordance with what obtains at present in Ontario, and cannot but fail to be accepted by this hitherto refractory province. We have greater fears of opposition to it from our Quebec Board, owing to the requirement of a central board of examiners. This has been opposed at various times by

both the English and French divisions of the profession here. The system of assessors representing the College at the examinations of the various universities at present in vogue is the only method hitherto found to be generally acceptable in this province, and while it may be regarded as approaching an equivalent of the method now proposed, it would not comply with its literal requirements, and does not in fact offer such a safeguard against candidates passing and not being up to the required standard. We think also that, besides requiring elementary physics and chemistry, botany should have been included.

The following are the recommendations of the committee:—

I. There shall be accepted for matriculation:—B. A. from any recognized university, or in lieu thereof, first class or Grade A Provincial certificate in any of the Provinces, for teachers' license, or an examination in the following branches, which shall be compulsory and conducted by the various Councils of the Educational Departments of each Province, viz:

1. English grammar, composition, literature and rhetoric.
2. Arithmetic, including vulgar and decimal fractions and extractions of the square and cube root and mensuration.
3. Algebra to the end of quadratic equations.
4. Geometry. First three books of Enclid.
5. Latin. First two books of Virgil's Æneid or three books of Cæsar's Commentary, translation and grammar.
6. Elementary mechanics of solids and fluids comprising the elements of statics and dynamics, hydrostatics and elementary chemistry.
7. Canadian and British history with questions in modern geography.
8. Translation and grammar of any two of the following subjects, Greek, French and German.
9. In lieu of the above we also recommend that any student presenting a certificate after examination from the professors of any standard or approved university in Her Majesty's Dominion, of having completed a course in said university, be accepted in any of Provinces of Canada for matriculation and registration.

Fifty per cent, of the marks in every subject shall be required for a pass and 75 per cent. for honours.

II. Professional Education. (a) The curriculum of professional studies shall begin after the passing of the matriculation examination and registration, and shall comprise a graded course in the regulation branches of four yearly sessions of not less than eight months in each year.

(b) The subjects to be Anatomy, Physiology, Chemistry, Materia Medica, Therapeutics, Practical Anatomy, Histology, Practical Chemistry, Pharmacy, Surgery and Chemical Surgery, Medicine

and Clinical Medicine, including diseases of eye, ear, throat and nose, mental diseases, obstetrics, diseases of women and children medical jurisprudence, toxicology, hygiene, pathology, including bacteriology,

(c) That at least 24 months out of the graded four years of eight months each be required for attendance in hospital practice.

(d) That proof of attendance on not less than six cases of obstetrics and two post mortem examinations be required.

III. Examinations. (a) All candidates for registration in the various Provinces in addition to having fulfilled the foregoing requirements shall be required to undergo examination before examiners to be appointed in each of the Provinces by their representative Councils.

Fifty per cent. shall be required for a pass and 75 per cent. for honours.

IV. Your Committee recommend that, as soon as the foregoing basis of agreement is ratified by the councils of the various Provinces, each council shall endeavor to secure legislation to authorize the carrying out of the foregoing preliminary and professional curriculum, and to embody the following to secure a Board of Examiners for a Dominion qualification, viz:

"That to soon as the various councils of the Dominion shall establish an Examining Board for the Dominion, conducted by examiners appointed by the Medical Councils of the several Provinces, their candidates passing a successful examination before the said Board and obtaining a certificate to that effect, shall be entitled to registration in the several Provinces of the Dominion on payment of the registration fee, providing he is not guilty of infamous or disgraceful conduct in a professional respect."

Your Committee desire to recommend that efforts to ascertain the practicability of Federal legislation leading to the establishment of a central qualification which will place the profession in Canada upon an equal footing with that of Great Britain, and Dr. Roddick be authorized to take the necessary steps in said matter.

We further recommend that this Association shall appoint a Committee who shall consider and recommend the details as to the number of examiners to be appointed—the method of conducting examinations,—the fees to be charged and other necessary details to bring the aforesaid scheme into active operation, which details the officers of this Association shall with the foregoing send to each of the respective councils for approval.

The Seventeenth Annual Announcement of the New York Post Graduate Medical School and Hospital, University of the State of New York, for 1898-99 has just been issued. It shows that 523 practitioners of Medicine have attended its courses during the past year. They came from the various States of the Union and the Dominion of Canada. There were ten physicians from foreign countries, two of these being from India and one from Japan. Only 96 were from the State of New York.

Miscellaneous.

THE JOHNS HOPKINS MEDICAL SCHOOL.

Twenty-two medical students were graduated from the Johns Hopkins Medical School this year. Four of these were women. Dr. Osler will be dean of the school in place of Dr. Welch. Drs. T. C. Gilchrist and J. W. Lord have been made clinical professors of dermatology, and Dr. Louis E. Livingood has been made associate in pathology.—*Medical Record.*

THE PASTEUR MONUMENT.

The *British Medical Journal* says that the monument to Pasteur, which is to be erected in Paris in the space in front of the Pantheon, is now almost completed. M. Falguière, the sculptor, has introduced certain modifications into his original design, in which Pasteur was simply represented as overcoming death, which was in the act of flight. Now a group of a mother with her child, thanking Pasteur, has been added on the right, while behind the central figure Fame is shown crowning him with laurels. The international subscription to the memorial now amounts to nearly $65,000.—*Medical Record.*

EYE LANGUAGE.

No part of the human countenance engages our attention so frequently as the eyes. When face to face in conversation, we do not look at the lips—although, as a rule, the attention is very quickly taken by any movement—but at the eyes of the person with whom we are speaking. So much is this the case that the habit of many deaf people of watching the mouth always strikes us as peculiar. In fact, one usually feels that there is a sense of incompleteness in the association of mind with mind by means of conversation if there is not a continual interchange of glances making a kind of running commentary on the words spoken. The same may be said of ordinary greetings when two people shake hands: unless there is at the same moment a meeting of friendly looks the ceremony loses much of its meaning.

Now why is there this continual meeting of eyes accompanying all kinds of human intercourse? Partly, no doubt, it is attributable to certain habits of comparatively recent date. The eye, "the window of the soul," is a more truthful exponent of the inward thoughts than the tongue, and seeing that speech is very frequently used not to tell the thoughts but to conceal them, we look to the eye for confirmation or the reverse for what our ears are taking in.—*From Eye Language, by* LOUIS ROBINSON, *in Appletons' Popular Science Monthly for July.*

Book Reviews.

Essentials of Histology, Descriptive and Practical, for the Use of Students. By E. A. Schafer, LL.D., F.R.S., Jodrell Professor of Physiology in University College, London; Editor of the Histological portion of Quain's *Anatomy*. New (fifth) edition, revised and enlarged with 392 illustrations. Lea Bros. & Co., Philadelphia and New York, 1898.

This book needs very little to be said of it, for it is well known to all. A "Schafer" means Schafer's Histology in medical language. It is sufficient to say that this is a new edition in which it is brought up to date. The chapters on the nervous structures of the body are enlarged by new material and also by new illustrations. Indeed, new illustrations are apparent all through the book. In all it is some fifty pages larger than the last edition.

PHILADELPHIA, Sept. 7th, '98.

DEAR SIR:

Encouraged by the large sale of the first two volumes of my New Series of Hand Atlases (two editions of Jakob's *Internal Medicine* having been sold in less than four months), I visited Germany this summer and made a contract with the central publisher, agreeing to purchase from him one hundred thousand copies of the lithographic plates. There are not more than a hundred thousand physicians in this country, and this seems an extraordinarily large undertaking. When, however, you take into consideration the beautiful colored plates, which are produced by the most skilful artists obtainable in Germany, and the fact that the books are sold at a price which would have been impossible unless there had been a combination of some eleven publishers, it does not seem to me a difficult undertaking, as I am convinced that when the profession sees these works they will meet with a very large sale. I especially call your attention to the circular enclosed, which gives you a full description of the Atlases. The mechanical execution of these lithographs is of the very best, and the illustrations are equal to, if not better than, those in the large Atlases, which heretofore have sold for from thirty to forty dollars. I personally examined the plates which are now being produced for External Diseases of the Eye and the Atlas of Skin Diseases, and found them marvels of beauty. By reason of my new contract, the central publisher has agreed to assert in all new volumes an additional number of colored plates, thus making the newer volumes more beautiful than those that have already been published, and yet they are to be sold at the same price.

Besides the Atlases which were sent to you this summer for review, I have sent you the revised edition of *DaCosta's Modern Surgery*, the second edition of *McFarland's Pathogenic Bacteria;*

and I now have ready, and will send you in a few days, the second edition of *An American Text-Book of the Diseases of Children*, and *An American Text-Book of Gynæcology*. Both of these text-books have been thoroughly revised and a large amount of new material added. I will also send you in a few days the fourth revised edition of *Vierordt's Medical Diagnosis*. This work has been entirely re-written and very much enlarged. Vierordt has gone through three very large editions in this country, and is now a recognized standard text-book on Medical Diagnosis both in this country and abroad. Dr. Stuart's translation has met with a very good reception in the English market, where I have placed several large editions. You will also shortly receive the second edition, revised, of *Griffith's Cure of the Baby* and *Butler's Materia-Medica and Therapeutics*. I am pleased to announce that we have almost ready, and will publish on or before October 1, Stengel's *Text-Book of Pathology*. This will be a work of about eight hundred pages, and will be a model text-book on modern pathology. We will also have ready on or about the 15th of October a *Text-Book of Obstetrics*, by Barton Cooke Hirst, Professor of Obstetrics at the University of Pennsylvania. This will be a profusely illustrated text-book on Obstetrics, of about eight hundred pages. Dr. Hirst has embodied in this book a series of original illustrations, which he has collected in his work as Professor of Obstetrics at the University of Pennsylvania. I expect these two works—Stengel's Pathology and Hirst's Obstetrics—to be leading text-books on their respective subjects during the coming season, as they are both written by men of well-known ability in their respective lines.

The American Pocket Medical Dictionary will be ready before the first of October. This is an entirely new work, designed as a handy volume for physicians and students. It will contain a total of over 26,000 words, or about 5,000 words more than any other pocket dictionary. It will form a handsome volume bound in full limp leather.

We shall have ready on or about January 1, *An American Text-Book of Diseases of the Eye, Ear, Nose and Throat*, edited by Drs. deSchweinitz and Randall; also Church and Peterson's *Mental and Nervous Diseases*. Both of these books will be well illustrated. I shall be glad if you can give me a preliminary announcement of these forthcoming works, together with a special notice of my Medical Hand Atlases. I more particularly desire to call the attention of physicians in this country to the Hand Atlases, and to explain to them how it is possible to supply these books at so low a figure. This, I think, is partially explained on the third page of the circular which I enclose herewith. I would be pleased, however, if you can lay stress on the fact that the initial cost of publication in the making of the expensive colored plates is borne by eleven publishers instead of one, as is usually the case, thus making it possible to produce them at so low a price.

With kind regards and best wishes for the coming season, I am

Yours sincerely,

W. B. SAUNDERS.

PUBLISHERS DEPARTMENT.

LITERARY NOTES.

Appletons' Popular Science Monthly for October will contain an article by Edward Atkinson, entitled "The Evolution of High Wages From Low Cost of Labor." He points out that in every branch of industry there has been a progressive advance in the rate of wages, and that this advance has been accompanied by, and is in fact a consequence of, a general decline in the prices of nearly all products.

"Russia and the Slavs" is the title of an instructive article by Prof. William Z. Ripley, which will appear in *Appletons' Popular Science Monthly* for October. The rapid growth of Russian civilization, and the prominent position which she is assuming among the modern nations, give the article a popular interest quite apart from its strictly scientific aspects.

Alice Carter Cook is the author of a fully illustrated paper entitled "Plant Life in the Canaries," which will appear in *Appletons' Popular Science Monthly* for October. These "Fortunate Islands" of Lucian, "abounding in luscious fruits and covered with luxuriant forests," are to-day scarcely at all known or appreciated by the general traveller after health or pleasure. A reading of Mrs. Carter's article, however, will give one a most delightful picture of their beauty and interest, as well as a great deal of information of scientific value.

"Weather Freaks of the West Indies" is the subject of a short article by Felix L. Oswald, the naturalist, which will appear in *Appletons' Popular Science Monthly* for October. These at present much-talked-of islands are, it seems, peculiar as well in their weather as in their inhabitants, and some of the more curious manifestations of the former are described and explained by Dr. Oswald.

Chapter IV in the series on "The Evolution of Colonies," by James Collier, is entitled "The Law," and will appear in *Appletons' Popular Science Monthly* for October. It is unusually short, but full of important matter.

MAGAZINE NOTES.

The Living Age, in its issue for October 1st, begins a new serial story, translated for its pages from the French of Th. Bentzon (Mme. Blanc). The story is entitled "Constance," and it is the study of the life of a young girl. Important ethical questions, especially that of divorce, are touched upon, and the story has a high moral purpose. The translation is made by Mrs. E. W. Latimer, and is authorized by Mme. Blanc.

With the first number for October, *The Living Age*, the weekly eclectic magazine which for more than fifty years has been a favorite with American readers, begins a new series and appears in a new and attractive dress, suggesting *The Atlantic Monthly* in the clear legibility of its page. The familiar cover is to be retained, but it has been newly engraved and otherwise modernised.

The Living Age, being a weekly magazine, suffers somewhat by comparison with the monthly magazines of the first class, if the comparison is made of single numbers. But *The Living Age* actually gives a larger amount of matter each month than any of the monthlies. Thus *Harper's Magazine* contains 172 pages each month; *The Century* 160 pages; *Scribner's Magazine* 128 pages; and *The Atlantic Monthly* 144 pages; while *The Living Age* gives each month from 280 to 344 pages, according as there were four or five issues.

Florence Bell's "Plea for the Better Teaching of Manners" in *The Living Age* for October 1st, will be profitable to all who, as teachers or parents, have anything to do with the training of young people.

The *Cosmopolitan* for September contains the following articles fully illustrated with excellent photogravures:—Frontispiece, "September." Horseless Carriages in Paris, illustrated, C. Inman Barnard. The Tyroleans, illustrated, C. Frank Dewey. The Roc's Egg.—A Study of the Modern Battleship, illustrated, Rupert Hughes. Gloria Mundi, illustrated by B. West Clinedinst, Harold Frederic. A Young Man from the Country, illustrated by Frank O. Small, Brander Matthews. Sonnet, Ella Wheeler Wilcox. Great Problems in Organization.—The Modern Newspaper in War Time, illustrated, Arthur Brisbane. The Equipment of Gladstone, illustrated, T. C. Crawford. Autobiography of Napoleon Bonaparte—IV. The Romance of an Emigrant Boy, illustrated, drawings by F. G. Attwood, Oscar Hammerstein. Captain Dreams Again, illustrated by Peter Newell, Capt. Charles King. The Morality of Perfumes, Harry Thurston Peck. A Question of Ethics. In the World of Art and Letters.

RICHARD WAGNER AS HE WAS.

The widow of Richard Wagner some time ago authorised her husband's lifelong friend, Houston Stewart Chamberlain, to write, with her assistance, two articles on "The Personal Side of Richard Wagner." Mr. Chamberlain undertook the work, and *The Ladies' Home Journal* secured the material. The articles are singularly valuable in that they give a complete picture of the man in his home and daily life, and contain much new matter, while many of the illustrations and portraits have never been printed. There will be two articles, "His Personal Side" and "How He Wrote His Operas," and the first one will appear in the October number of the magazine.

CANADA
MEDICAL RECORD

OCTOBER, 1898.

Original Communications.

ACUTE INFECTIVE PYO-NEPHROSIS, COMPLICATING PREGNANCY.

By H. L. REDDY, B.A., M.D., Physician and Accoucheur to the Women's Hospital; Prof. Obstetrics, Bishop's College, Montreal.

Mrs. A. F., age 24, married, Primipara, Canadian, was seen by me on the afternoon of Sept. 10th, 1898, suffering with intense abdominal pain. Temperature 102 3-5. Pulse 120. Was removed at once to the Women's Hospital.

History of present illness :—At 1 a.m. on Sept. 9th, while asleep was awakened with an agonizing pain in the right half of the abdomen and over the right lumbar region, accompanied by head-ache, nausea and vomiting, and pain down the front of the thighs.

On careful examination in the hospital, it was found that there was neither appendicitis, tubal or bladder trouble to account for the condition.

The urine was drawn off and found to be acid. It was filled with pus cells and a few cells apparently from the pelvis of the kidney or ureter.

Diagnosis of probable pyo-nephrosis was made.

Personal history :—Patient a well-nourished young woman. Had always enjoyed the best of health before Sept. 9th. Had the ordinary diseases of childhood. On the left side there is a congenital want of development and flattening of the pelvis, both false and true, and a shortening of the left leg by about two inches..

The menses began at thirteen, were regular, small in quantity and four days in duration, until the 15th of last

March, after which date she ceased to menstruate, so that, at present, she is about six months pregnant.

The respiratory system, circulatory system and general system present nothing note-worthy.

Family history:—Both parents died at an early age. Cause of death unknown.

Sept. 11.—Temperature varied, as per chart, 102 to 103-1-5. Pulse 112 to 130. Tenderness all over abdomen, but especially over both kidney regions. Mustard and linseed poultice was applied over the lumbar regions, followed every four hours by plain linseed.

The quality of the pulse being poor, she was given Liq. Ammon. Acet. and Spts. of Ether Nitrosi one drachm every two hours.

Sept. 12.—Temperature varied, as per chart, to 105. Pulse 130. Bowels were freely moved with Tait's Mixture. Had a chill at 10 a.m.

Urine examination showed as follows:—Urinary sediment contained pus cells, many varieties of cocci and but few bacilli; within the pus cells were found diplococci, which were not the diplococci of Neisser.

Urine acid, and 24 oz. passed in the 24 hours. No albumen or sugar. Urea about normal.

Sept. 13th.—Temperature varied to 102. Pulse 140. Chill at 11.15 p.m.

Sept. 14.—Temperature varied to 103. Pulse to 135. Pulse failing, she was given strychnine 1-60 gr., hypodermically at 7.15 a.m., repeated at 9 a.m., also Spt. Vin. Gallici, half ounce.

In consultation with Drs. England, Burnett and Fisk, it was decided that an accouchement forcé was necessary to save her life.

Pulse was failing, and absorption of pus was going on. Tenderness over the abdomen and right kidney, as well as agonizing pain being constantly present.

The patient was anæsthetized, and the os, which just admitted the tip of the finger, was dilated with a Goodell's dilator, the cervix being about 1½ in. in length. Dilatation was proceeded with bi-manually, and in 12 minutes sufficient

WOMEN'S HOSPITAL, MONTREAL.

Name *Mrs. A. F.*

Date of Delivery *14th.*

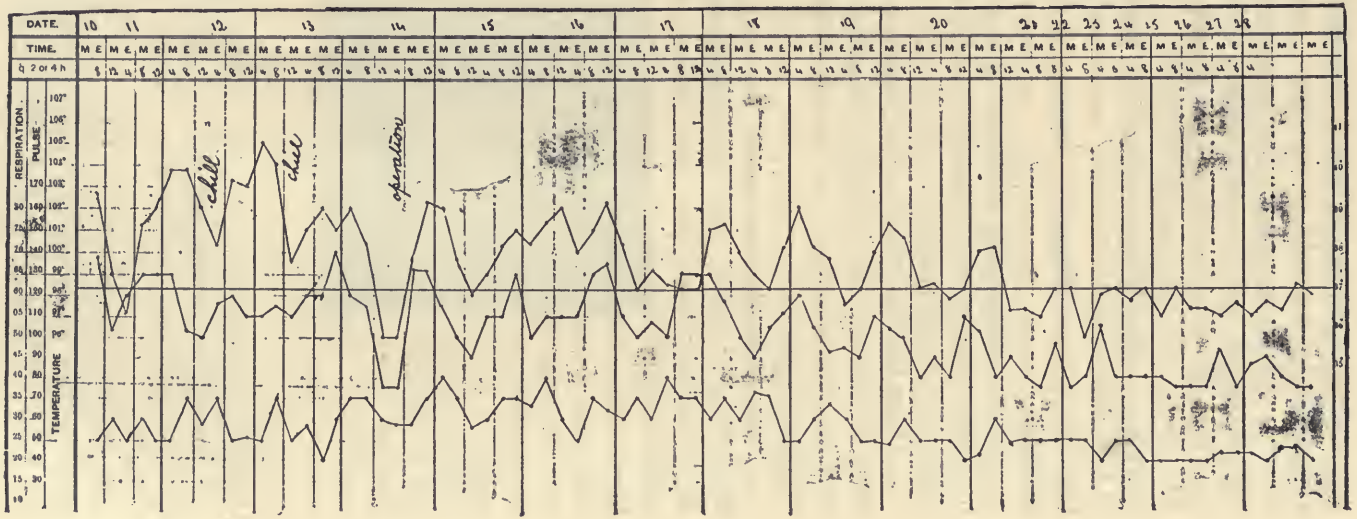
Month *September, 1898*

H. S. *J. Edgar Tanguay*

Physician *Dr. Reddy*

Nurses *Bradshaw & McBride*

No. *2088*



dilatation was reached to enable the hand to be introduced and the leg of the child to be seized and delivered. The placenta quickly followed. She was given an injection into the abdominal wall of Aseptic Ergot (P. D. & Co)

Post partum hemorrhage of a severe character set in. The abdominal aorta was compressed, a hot water douche was given, which failing to check the hemorrhage, a douche of Liq. Ferri Perchloridi in hot water was given, which had the effect of contracting the uterus and stopping the hemorrhage.

The child was born alive and kept alive for two hours by artificial respiration. Appearances of child indicated about six months utero-gestation.

Upon the temperature going down to 97½, after operation, hypodermic of strychnine was given. A diet of milk and beef-tea was ordered. Proto-nuclein tablets were given every two hours.

Sept. 15th.—Temperature 100 to 101. Pulse 130. Patient slept well. Pain completely disappeared. Still slight tenderness over the right kidney. Hot water intra-uterine douche was given. A quart of normal saline solution thrown into the rectum. Urine drawn off by catheter. Sediment contained neo-microcytes (in clumps) throwing out processes which coalesce, forming a network, which encapsuled the greater quantity of the diplococci present; while as a rule externally to these clumps were found numberless bacilli. (This action may have possibly been due, at least to a certain extent, to the proto-muclein given.) Red and white corpuscles were visible also. Urea deficient; urine acid. Slight trace of albumen. No sugar. Sp. G. 10.18. Quantity 26 oz. in 24 hours.

Sept. 16th.—Patient feeling well, slept well, hungry, though the temperature and pulse remain high.

Sept. 17th.—Temperature and pulse nearing the normal line. Patient feels comfortable. Bowels freely moved with Tait's Mixture. Urine drawn off. Sediment contains pus cells almost entirely free from micro-organisms. Number of bacilli notably increased and found externally between the pus cells. Diplococci (extra cellular) were to be seen at

rare intervals. Urine acid. No albumen or sugar. Urea increased. 10 grs. of Salol was ordered every six hours, with the hope of removing or diminishing the pus.

Sept. 18th.—Patient improving. Salol stopped, as the urine has become a vivid grass green, showing the carbolic acid action.

Sept. 20th.—Patient feeling so well, allowed to sit up in bed for a few minutes.

Sept. 23rd.—Patient so well, allowed to get out of bed and sit up for a few minutes. Urine acid. No albumen or sugar. Urea normal; 40 oz. passed in 24 hours. Sediment contained no pus cells, a few leucocytes, a few epithelial cells, a few crystals of the earthy phosphates, bacilli and cocci,—extra cellular,—such as are found in healthy urine, which has stood for some little time.

Sept. 26th.—Patient apparently perfectly recovered.

Sept. 28th.—Patient left hospital. Uterus involuted almost to normal. All tenderness over the abdomen and lumbar regions completely gone.

ACTUAL SIZE

This photograph was taken 12 days after operation, showing that the condition of the os and cervix are almost normal in every respect, there being only a slight laceration on the right side of the os, not extending completely through the cervix.

This case presents, I think, some very interesting features. A healthy woman suddenly seized with such severe pain, nausea and vomiting, with pregnancy complicating it, made the diagnosis doubly difficult. A kidney stone

naturally suggested itself, and was at first difficult to exclude. But I think the urinary analysis and the result of the operation placed beyond doubt the fact that it was not due to stone. If an infective pyo-nephrosis, how was it produced? The only explanation I can offer is that it proceeded from the external genitals through the bladder, affecting it little if at all, and setting up the inflammatory condition in the pelvis of the kidney. According to Klecki, who has made researches in this particular line, he has found that not only is it possible, but very frequently it happens, especially in cases of constipation, for the venous circulation to become infected from the bowel and hence the blood generally. There might be but little systemic disturbance at first until some particular portion proved suitable for the growth of these micro-organisms and their change into virulent forms. This might be an explanation of the infection in this case, although constipation was not at all marked, two days being the longest period. That pregnancy had a great influence on it, I have no doubt, as shown by the prompt relief by the emptying of the uterus. It does not seem probable that pressure directly on the ureters affected it, as the uterus was apparently in the ordinary position, and if the ureter was compressed by the uterus it would probably have been a slow process, if even it were possible, which seems hardly probable, and unlikely to have set in with such severe and sudden symptoms, and I do not, therefore, believe it to have been due to pressure, which could hardly have been exerted.

The effect of pregnancy being to increase, not only the blood pressure, but the actual bulk of almost all the organs, added to the effect of an acute infection of the pelvis, of the kidney and perhaps ureter, and the accompanying tumefaction might have greatly diminished the lumen of the ureter, and by this means have produced some if not all the serious kidney symptoms by pressure, which would no doubt be largely relieved by the interruption of utero-gestation, and the hæmorrhage, which in this case accompanied it, is, no doubt, a possibility.

It was also interesting to notice how rapidly the neo-microcytes were produced and their prompt action in encapsuling the cocci and thereby stopping the infective process.

Whether the proto-nuclein given had any action in producing this effect is hard to say, but it should act in increasing cell proliferation if it has any effect at all. The Salol seemed to act beneficially in diminishing the pus, although 60 grains produced the carbolic action. The general condition of the patient and the failing pulse with chills, continued pains and soreness, in other words, septic symptoms, decided us probably more than anything else in removing the contents of the uterus, the result, I believe, justifying our procedure.

I am indebted to Dr. A. J. Richer for his careful microscopical and bacteriological report of the urine to Drs. England, Burnett and Fisk for their able assistance, and to Dr. Oliver for the photogram.

Montreal, Oct. 19th, 1898.

OXYTUBERCULINE IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

In 1896 Dr. J. O. Hirschfelder, of San Francisco, inspired by the fact that many cases of tubercular peritonitis benefited by cœliotomy, conceived the idea that the benefit was likely obtained through the oxidation of the toxine (eliminated by the micro-organism) into an anti-toxine when air was admitted into the heretofore closed peritoneal cavity. The idea no doubt was a very ingenious one, suggesting the probable benefit which might be derived in treating pulmonary tuberculosis by inoculations of an oxidized tuberculine, *i. e.*, tubercular toxine obtained artificially by culture, extracted by Koch's method and oxidized by means of peroxide of hydrogen at a moderately high temperature. The resulting product, which closely resembles its parent (tuberculine) physically, he calls oxytuberculine, and, as claimed by Dr. Hirschfelder, enjoys perfect inocuity when injected hypodermically, even in large doses into healthy individuals.

My first clinical test of oxytuberculine was commenced on the 11th Dec., 1897.

A young man of 22, with a tubercular family history, was examined early in November, when the left apex showed signs of extensive infiltration, while the left showed signs of rather extensive softening, with here and there over both

lungs some moist râles. As far as could be ascertained, the patient had been coughing for 18 months, but had not been under any lengthy observation, neither had he been seriously treated. At this time dyspnœa was very marked upon the slightest exertion, emaciation advanced, cough troublesome, and expectoration profuse. The sputum showed Koch's bacillus in large numbers, along with streptococci. The tubercle bacilli were here and there slightly granular in appearance, but took the stain well. The pulse on the 15th November was 100 in the evening, and oscillated between 100 and 70, following the temperature curve, which varied from 100° to 97°, with morning remissions. Respirations varied from 18 to 26. There had been no hæmoptysis.

On the 11th of December he received his first injection of oxytuberculine, 5 c. c., which was continued daily for 6 days, when the dose was increased to 10 c. c. for about 20 days, with an occasional day upon which no inoculation could be made owing to severe reaction. The temperature curve during the early part of this treatment was increased, as well as the pulse and respiration curves. Usually after a 10 c. c. injection a temperature of 101° would fall to 98°. After the use of the first 100 c. c., the cough and expectoration had diminished, the patient felt stronger, the dyspnœa was less marked. Encouraged by this result the treatment was continued until 400 c. c. of oxytuberculine had been injected hypodermically. The last 200 c.c., however, did not produce the same reaction in bringing down the temperature, even when 15 or 20 c. c. were injected at one time. The treatment was here discontinued. Creasote and Syr. Hypophos. Co. had been given throughout, and were continued without much effect.

After this patient had received his first 100 c. c. of oxytuberculine the bacilli in the sputum showed distinct signs of sporulation, and this sporulation (which may be only a pseudo sporulation for a great number of bacteriologists) persisted for some time after the oxytuberculine injections had been stopped. This may have been only a coincidence, but is worthy of note as it only occurred in this one case of mine, which proved fatal about seven months after the oxytuberculine treatment had been discontinued, the patient

gradually declining, with persistent cough and expectoration, but without hæmoptysis.

Case No. 2.—A man of 45, a mechanic with a good family history, was first seen in March, 1898, after a rather profuse hæmoptysis. The apex of right lung was softened, moist râles being heard back and front; there was some emaciation, loss of appetite, slight dyspnœa on exertion, distressing cough, especially in the morning, with rather profuse expectoration, which was occasionally tinged with blood; night sweats not very marked, yet often present. This patient was given creasote and codeia and Syr. Hypophos. Co. The sputum was examined microscopically and showed numerous Koch's bacilli. Oxytuberculine was injected, beginning with 5 c. c. every second day and gradually increased to 15 c. c. for a final dose, completing the 100 c. c. in about fifteen days. When the sputum was again examined after the 100 c. c. of oxytuberculine had been injected the bacilli had entirely disappeared. Perhaps another coincidence.

The evening temperature, which had occasionally reached 100 deg., was now normal, cough and expectoration much diminished, appetite improved and gain in weight quite appreciable. This patient was under observation and treatment during seven weeks, when he was again allowed to go back to his work, and has since enjoyed excellent health.

Case No. 3.—A young man of 21, an office clerk, first consulted me in March, this year. In this case the family history was not very good. The father died of pulmonary congestion (?), mother living and apparently healthy. The left apex here was involved; a cavity about the size of an American silver dollar could be easily appreciated with moist râles back and front in the upper half of this lung. In the right lung the expiratory sounds were prolonged, accompanied by a few sub-crepitant râles to be heard chiefly in the upper half of this lung.

The evening temperature often reached 101 deg., pulse 110; dyspnœa upon the slightest exertion, chills, loss of appetite, emaciation and night sweats made a rather characteristic clinical picture of the disease, while the cough and expectoration were both troublesome and profuse. The sputum exam-

ined microscopically completed the clinical picture by showieg an abundance of tubercle bacilli. The same treatment as in case No. 2 was here instituted, but although there was marked improvement after the first 100 c. c. of oxytuberculine, yet the bacilli in the sputum persisted though somewhat decreased in numbers.

Not feeling over-confident, especially after the disappointment in the treatment of the first case, I did not persist with the oxytuberculine. This was the middle of April, the weather was quite favorable, so I sent this patient to the Laurentian Mountains, where he lived almost entirely in the open air, braced up by constant stimulation. His medication consisted of Wine of Creasote with Codeia and Emulsion of Petroleum. He made very rapid progress, gaining in weight while losing his cough. He was in my office a few days ago, and I failed at first to recognize him, so fat had he become. I examined his chest again. The left apex still showed the remains of the cavity, but no abnormal breath sounds anywhere. This patient can now walk five miles without dyspnœa or lassitude. I have again examined the sputum, which is now free from tubercle bacilli.

This last case is strong evidence that the only reliable means of treating pulmonary tuberculosis at present at our disposal are overfeeding, rest, open air. This shows how urgently Sanatoria for the treatment of this disease are required. The patients in these Sanatoria are under constant observation and constant tuition, and when well again can utilize the knowledge acquired during the treatment in preventing others afflicted like themselves from being so many sources of infection, spreading the disease broadcast in our crowded cities.

To resume, I may here be allowed to observe that the beneficial effects obtained by cœliotomy in peritoneal tuberculosis, which without doubt is due to the entrance of air into the peritoneal cavity and likely to the oxidation of the toxine of tuberculosis, is not sufficient ground for the adaptation of somewhat similar methods in the treatment of pulmonary tuberculosis, where the development of the tubercle bacilli goes on under aerobic conditions, i. e. in the presence of the oxygen of the air, while in the peritoneal cavity the toxines are secreted under anaerobic conditions.

Now, if Dr. Hirschfelder had oxydised tuberculine obtained by anaerobic cultures, might not the results have been different? Experimentation only can answer this question.

584 Wellington st.,
Sept. 15, 1898.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

THE INFLUENCE OF HEART DISEASE ON LIFE ASSURANCE.

The *Medical Examiner*, July, 1898, contains a paper on this subject, by C. Theodore Williams, M.A., M.D., F.R.C.P., read before the Life Assurance Medical Officers' Association (London). This is a second paper on this subject, the first dealing with the general features of the subject and disease of the pericardium and mitral valve. He first discusses the relative frequency of the different forms of valvular disease. The causes of aortic disease were congenital malformation, endocarditis and degeneration, the latter being the chief cause. Aortic disease was more common among men than women in the ratio of 21 to 5. The great danger of aortic incompetence is the possibility of a systole and sudden death; a diastolic murmur at the aortic cartilage, and the second sound audible in the carotids, indicates only slight incompetence and is only very serious if degeneration is present in the vessels. In aortic stenosis, the prognosis depends on the extent of the lesion, the amount of compensation through hypertrophy of the left ventricle, the absence of complication, the age of the patient, and the cause of the lesion, degeneration being less favourable than when the cause is endocarditic. Stenosis following severe incompetency is conservative and curative. All should be rejected except a few possessing exceptionably favourable features.

Hypertrophy should lead to rejection, where cause is capillary obstruction, high arterial tension, chronic renal disease, valvular disease, or trades where there is excessive strain. More favourable in athletes of middle life who have given up athletics and no valvular disease or degeneration, or in women when hypertrophy is due to frequent pregnan-

cies. Cases of permanent progressive dilatation are outside the pale of life assurance. Fatty degeneration of the heart is the most serious of all the diseases which attack the cardiac walls, owing more especially to its insidious course. No symptoms frequently indicating its presence until the fatal attack supervenes. Angina pectoris renders an applicant ineligible, tachycardia is unfavourable, and a pulse of 40 is unfavourable. The intermittent pulse when no cardiac disease and a loss of beat not more than 1 in 20 or 30 is harmless ; more serious after middle period of life, but good for 12 to 13 years ; sometimes due to tobacco. He gives the following summing up :—

In considering the question of acceptance or rejection of applicants affected with heart disease, due regard must be had to the following points :—

1. *Age*, both present and at time of attack.—Cardiac lesions that appear at twenty are more likely to improve than those coming on after forty, and the greater the age of a candidate the less probability there is of complete compensation.

2. *Sex*.—Women are less liable to aortic valvular disease than men. Men are less subject to mitral valvular disease.

3. *Occupation and Surroundings*.—Whether these are the same as those under which the cardiac disease was contracted, and whether they are likely to be temporary or permanent.

4. *Habits*, such as the presence or absence of alcoholism, excess of tobacco smoking, or the use of certain drugs.

5. *Origin*, of the cardiac disease, whether in endoor or pericarditis, or as the result of degenerative processes.

7. *The Nature* of the lesion, and specially whether it be progressive or stationary.

7. *The Amount of Compensation* established to overcome the difficulties of the circulation.

Careful study of the histories of persons affected by the various heart lesions has shown that a longer life is compatible with the existence of many of them than was formerly held, yet in the absence of large records it is impossible to reduce the probabilities in all cases to definite figures, and the subjoined conclusions can only be regarded as approximations to assist the medical examiner in his work, which must, after all, be directed to the circumstances of the candidate under examination and to his surroundings and outlook.

1. *Cases of adherent pericardium*, provided there are no valvular leisons, that the muscular walls are sound, and that there is no cardiac dilatation ; also that the adhesions are

not to the chest wall itself, may be accepted with a moderate addition of from three to five years.

2. *Mitral regurgitation* cases, where the origin is not degenerative and the compensation good, and where there are no dyspnœa and complications, can be accepted with an addition of from five to ten years, according to the age of the candidate.

3. *Cases of mitral stenosis* are less favorable, being liable to cerebral embolism, and can only be accepted if the disease be not progressive, if there be no accentuation of the second sound, no enlargement of the right side from either dilatation or hypertrophy, and no dyspnœa. They can then be accepted on less favorable terms than cases of mitral regurgitation.

Double mitral lesions, however, can only be considered with very large additions.

4. *Aortic valvular disease*, whether regurgitant or obstructive, cannot, as a rule, be admitted into the category of assurable lives; though favorable instances, where the lesions originate in rheumatic endo-carditis, and the compensation is complete, have been occasionally accepted with large extras.

5. *Cases of cardiac dilatation*, without compensation cannot, as a rule, be accepted at all, except when the dilatation is of a temporary nature, such as may follow over-exertion and over-smoking, but even here the case cannot be considered until all dilatation has subsided.

6. *Cases of cardiac hypertrophy* must be estimated with reference to the modes of causation, and no definite rule can be laid down, though lives where the lesion giving rise to the hypertrophy is not progressive, the muscular wall in a sound condition; the compensation complete and the vessels healthy, may be regarded as within the pale of life assurance as, for instance, athletes who have given up sports, and women whose cardiac hypertrophy originated in frequent pregnancies, but are now past child-bearing. Here the lives may be accepted with an extra, varying with the age.

7. *All forms of degeneration of the cardiac walls*, fibroid and fatty, must be excluded, and vigilant watch kept against their admission.

8. *All forms of cardiac neurosis* are not equally dangerous, but they are too uncertain in their clinical life history to allow of being admitted among the assured.

A system of endowment, making entire payments before a certain age, would probably protect assurance offices, and preclude the necessity of large extras.

THE CURE OF WRITERS' CRAMP AND TELEGRAPHERS' PARALYSIS.

S. H. Monell, M.D., of Brooklyn, N.Y., in the *Medical Record* for July 23, 1898, claims that after four and a-half years of conservative observation of experiment he is now able to state that these affections are curable in all stages and in every uncomplicated case. He succeeded in getting good results only when he applied himself steadfastly to the improvement of nutrition. Rest is not enough in these cases, nor is exercise, and drugs have not cured any cases. Electricity he found, when correctly applied, gave him these brilliant results. The disease is essentially a peripheral degeneration of nerve and muscle nutrition, and cure occurs when this is restored. The arm is first subjected to a gentle warming-up application to quicken the circulation, as the preliminary canter warms up a racehorse before he enters the race. The arm is next subjected to general nutritional muscular contractions, regulated in energy and number by the tolerance of the tissues. Finally the arm is given a refreshing, restful, nutritional application, which leaves it at the close of treatment invigorated, buoyant and elastic. The total treatment requires about ten minutes, and every moment and every detail of each application aims at improving the nutrition of muscle fibres. Cases recover in from two weeks to two months, and the entire general health is built up by the treatment. While benefit may be obtained from all three currents, the best results are obtained by using two currents, the galvanic and static. Dr. Monell speaks enthusiastically of his results in these cases. As he was a sufferer himself, he has given the subject long and careful thought, and the results he claims, are such as will entitle him to the gratitude of the profession and a class of sufferers for which hitherto only palliative measures were available.

OBSERVATIONS ON MORTON'S PAINFUL AFFECTION OF THE FOURTH METATARSO-PHALANGEAL ARTICULATION AND SIMILAR AFFECTIONS OF THE METATARSAL REGION THAT MAY BE INCLUDED WITH IT UNDER THE TERM ANTERIOR METATARSALGIA.

A lengthy paper on the subject is published in the *Medical Record*, Aug. 6, '98, by Royal Whitman, M.D., New York.

This affection was first described by Dr. T. G. Mo rton, of Philadelphia, in 1876, and is characterized by recu rrent

pain about the fourth metatarso-phalangeal articulation, sharp and cramp-like in character. If not checked, it extends to the other joints, to the dorsum of the foot and legs. He supposed it to be due to pinching of the external plantar nerve or its interosseous fibres, by the adjoining fourth and fifth metatarsal bones. The mobility of the fifth and its shortness allowed it to roll above and under the fourth metatarsal bone; the pressure on the nerve caused a neuritis. The chief causes were rupture of the transverse ligament and tight-fitting foot-wear.

The treatment adopted was removal of the head of the fourth metatarsal bone. The history of the cases reported since then is given:

The affection is relatively uncommon in hospital practice; it is more common in females than in males. Of 84 cases collected from the sources mentioned, including 21 of my own, 64 were in females and 20 in males. It is not an affection of early life, the average in 64 cases being 33 years, although in many instances the symptoms had been of long duration. As to the location of the pain, in 60 cases it was referred to the fourth metatarso-phalangeal articulation, in 6 cases to the third and fourth, in 6 to the three middle toes, and in but 6 was the fourth articulation free from pain. Of my own cases, the cramp was felt in both feet in 6, in 9 in the right only, in 6 in the left; in 14 cases the pain was referred to the fourth toe, in 3 cases to the third, in 2 cases to the second, third and fourth, in 1 case to the second, and in 1 case to the third and fourth. In 3 cases there was marked depression of the longitudinal arch, in 3 cases slight weakness of the arch, in 2 cases an exaggerated arch, and in 13 cases the arch was normal. In 3 cases the symptoms were ascribed by the patients to tight shoes, in 3 cases to injury, in 1 case to "nervous prostration," and in 14 cases no cause could be assigned.

The pain is usually felt only when a shoe is worn; the pain is intense, "like a toothache," "sickening," "like a hot coal." Sometimes the cramp is preceded by a sensation of something slipping or moving in the foot, and in such instances a similar snap also often precedes the relief of the symptoms; removal of the shoe usually relieves the pain. The cases are usually associated with a weakened and depressed anterior metatarsal arch, which condition predisposes to pain on lateral pressure. The varieties of depressed arch are a rigid depression similar to flat-foot. The pain is more or less constant when the foot is used; simple non-rigid depression of the anterior arch; the foot is broadened and relaxed; in typical Morton's neuralgia the foot may appear

perfectly normal, or there may be depression of both longitudinal and anterior arch. Where no deformity exists, abnormal mobility of the fifth metatarsal bone allows it to override the fourth, causing painful pressure when a tight shoe is worn. In walking, elevating the heel increases the lateral pressure, especially going down hill.

Dr. Whitman thinks that it is the dorsal digital nerves that are compressed rather than the plantar. The chief cause being tight shoes, besides injury, strains and over-exertion, the beneficial effects of wide thick-soled shoes is explained. The shoe should have a low heel, a wide thick sole, a well-fitting arch and abundant room for the toes, the main object being to support the anterior arch. Sometimes benefit is obtained by having the inner sole arched upwards to sustain the foot in the normal position, or a pad of sole leather is fixed by adhesive plaster behind the head of the metatarsal bone of the affected joint. A properly fitting metal support, which may sustain the longitudinal arch as well, is best in some cases. Resection he thinks rarely required. The following conclusions are given :—

Morton's painful affection of the foot and the less definite symptoms that may be included under the term anterior metatarsalgia, although not identical, are nearly allied, in that an abnormal relation of the metatarso-phalangeal joints to one another, combined with pressure, is the cause of the symptoms. This abnormal relation is caused by an occasional or habitual depression of the anterior metatarsal arch or of one of the bones of which it is composed. Habitual depressions of this arch is often combined with general weakness of the foot, and much of the discomfort is due to abnormal pressure on the depressed bones from beneath. Occasional and typical Morton's cramp may exist without obvious deformity, and in such instances it is caused by lateral pressure upon an overriding fifth metatarsal bone, due probably to an abnormal laxity of the ligaments. The most constant of the general causes predisposing to weakness of the front of the foot, as well as the most direct cause of the symptoms of discomfort in this region, is the improper shoe.

The cure of the condition may be attained by supporting the anterior arch, by avoiding the exciting causes of the pain, by correcting, if may be, abnormalities of structure or function, by strengthening the weakened foot by exercises, and by affording its mechanism the opportunity for functional activity by the use of a proper shoe.

URTICARIA WITH RECURRENT HEMATEMESIS.

Dr. T. H. Chittenden, in the *British Journal of Dermatology*, gives the history of a case of this interesting disease in a woman aged thirty-three. The patient had various attacks of urticaria, the first of which appeared in April last. The ordinary wheals of this disease appeared over the body generally, especially on the back, thighs, back of hands and face, usually coming out at night and subsiding towards morning. These continued until June, and the symptoms increased in severity, the tongue and lips becoming very swollen. There was sore throat with marked dysphagia. These attacks usually lasted about a week, and after a few days there was a cessation of the severer symptoms. They recurred early in August, when she was seized one morning with great nausea, and vomited large quantities of blood and coffee-ground fluid. She felt better immediately. The urticaria totally disappeared in a day or two, and she was entirely free until early in October, thus enjoying a respite of six weeks. It then returned with all its former severity, and ran a similar course until the middle of November, when she suffered from distressing nausea, vomiting still larger amounts of bloody fluid, with a great sense of relief and the speedy disappearance of the rash.

Concluding his article the author says: "In this, as in the few other recorded cases of recurrent urticaria, the extreme difficulty of entirely excluding the possibility of gastric ulcer somewhat obscures their pathology, as in all of them there has been a certain amount of dyspepsia." We may conclude that hematemesis was the result of hemorrhage from the stomach, due to capillary rupture occurring when the mucous membrane of that organ was in a state analogous to the urticarial conditions of the skin. That it is due to some toxin circulating in the blood there can be no doubt, but the nature or origin of that toxin is not known. That it must be autogenic, and not taken in from without, seems most probable, for it appears to make no difference when the strictest rules of diet are rigidly adhered to.—*Medical Age.*

HEART COMPLICATIONS IN DIPHTHERIA.

Dr. Cleon M. Hibbard has published (*Boston Med. and Surg. Journal*), (*Pacific Medical Journal*), the results of a systematic study of the heart complications in a large number of cases of diphtheria treated in that hospital. The results of the postmortem examinations in the seventy-two

fatal cases which occurred are not given in the report, and these results are largely drawn upon in formulating the following conclusions reached by the author.

1. A rapid pulse rate in diphtheria is to be dreaded. Death usually results when it exceeds 150.

2. A slow pulse—60 in young children—is a sign often of serious heart trouble.

3. Irregularities in the pulse occur in about 10 per cent. of the diphtheria cases, and are generally significant of cardiac complications.

4. A systolic murmur at the apex is heard in about one case in ten, and its prognostic value depends upon the nature of the cause.

5. A *bruit de galop* in diphtheria is a most fatal sign.

6. After four weeks, with no heart symptoms in diphtheria, there is little probability of subsequent cardiac trouble in the convalescence.

7. All diphtheria patients who have tachycardia, bradycardia, irregular or weak pulse, a systolic murmur at the apex, vomiting or any paralysis—especially palatal—should be kept quiet in bed.

8. The most important element in the treatment consists in absolute rest in bed.

9. The vagus nerve in the fatal cases always had some evidence of degenerative changes. The weight of the heart was increased.

10. The cause of death is usually from cardiac thrombi, dilatation or paralysis, produced most probably by the toxin of the diphtheria bacillus.

APPENDICITIS.

The discussion of the papers on this subject in the Surgical Section of the American Medical Association, at Denver, was a telling emphasis to the criticism we made. Careful, clear-thinking, experienced heads insistingly declared for opposing views, while there was the usual corroboration of both sides by the less weighty and less informed. Not a little of the spirit shown was sharp, probably bitter, and possibly at times even personal. We are all somewhat prone to defend our own views, and seek the bubble, reputation, even with our own mouths. It is a question if the discussion did any good ; is almost a certainty that it did harm. Radicalism fails to convince the courageous conservative ; it leads to danger the incompetent and vacillating ; it discourages and routs the expectant and hopeful. In questions which involve not only life and death, but as well

the reputation of the surgeon, the consent of the patient, facilities for success, etc., the theoretical must yield to the practical. Even if we accepted the dictum that a tender appendix should always be excised--though a congested liver, a painful kidney, a swollen spleen, an inflamed intestine may be allowed to declare its course—there must arise the reflection that practically such radicalism can never become popularly accepted ; hence, to urge it is to discourage rather than promote concert of action. In principle it is true that an offending appendix is better out, not because it is always a source of danger, but because no judgment can declare when it is not ; but in practice it is equally true that the best interest of the patient cannot always be served by radical adhesion to fixed laws.

Here, as elsewhere, the survival of the patient is through the fittest of conditions. These conditions must be controlled by the judgment of the surgeon. To obtain definite data, a point of departure must be agreed upon. It is clear not ten surgeons in this country operate on all cases of appendicitis as soon as the diagnosis is made, however much they may desire to do so. Many of the remainder who follow these in ten in theory are far behind in practice. The immense majority are conservative in practice, whatever may be their theory. The general practitioner is utterly unconvinced. Between these two extremes is fixed the great gulf of death from indecision and neglect.

An eminent operator said in this discussion: "There can be no compromise!" But is it true? Do not arbitration, concession, daily and hourly, in our lives protect and strengthen both our dignity and our security?

Not only is a compromise advisable, but at present it is unavoidable, and is entered into every day by the very radicals who oppose it.

The general practitioner, having arrived at a diagnosis, will rarely willingly call into consultation the surgeon who he knows has already made up his mind ; who he knows will not *consult* with him, but will dictate an operation in a lesion he himself admits will recover without it three times out of four. Such uncompromising absolutism not only humiliates the physician, but scares both him and his patient away till the time of safety is past.

Though it is true in skilled hands, under favourable conditions, an operation in all cases at the time of diagnosis will probably secure the highest rate of recovery, yet it is true this course is so impracticable we must seek the most acceptable compromise upon which common ground the best results can be secured.

SURGERY.

IN CHARGE OF

GEORGE FISK. M.D.

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospita.

RECURRENT CARCINOMA OF THE FEMALE BREAST ENTIRELY DISAPPEARING UNDER THE PERSISTENT USE OF THYROID EXTRACT CONTINUED FOR EIGHTEEN MONTHS.*

By FREDERICK PAGE, M.D., Edin., M.R.C.S., Eng.
Surgeon to the Royal Infirmary, Newcastle-upon-Tyne, etc.; and
WILLIAM H. BISHOP, M.B., B.S., Durh.

In December, 1895, Mr. Page was asked by a former house surgeon of his, Dr. Bishop, of Wylam, to see him with a woman, aged 61 years, who was suffering from carcinoma of the left breast of some six months' duration. The general health was very much impaired. The growth was situated in the upper part of the breast, and was of the size of a hen's egg, and both the axillary glands and their lymphatics were affected. On January 7, 1896, the breast was removed, together with the axillary glands and fat, the lymphatics and the pectoral fascia. In April there was a recurrence of the disease in the neighborhood of the cicatrix, and on July 18 several nodules, varying in size from that of a pea to that of a walnut, were removed, A portion of these growths was sent to the Clinical Research Association, and reported on as follows on July 29 :—" Both specimens show a soft carcinomatous growth, with small alveoli and very scanty stroma. At first sight it might be mistaken for sarcoma, but the mode of growth at the edge and the invasion of the fatty tisues is unlike that of sarcoma. In the section of the skin the dense fibrous tissue in the corium prevents any very rapid multiplication of the cancer cells." Three weeks after this second operation other nodules appeared in the scar, and later a group developed below it and in the subcutaneous fat. Further interference was declined, and, indeed, did not seem to be feasible. The nodules steadily increased in size and number. In September, 1896, at the suggestion of Dr. Bishop, thyroid extract was given quite as a forlorn hope. At first three grains were taken daily, and the dose was gradually increased till fifteen grains could be taken daily. During the eighteen months that the treatment was persistently followed,

* *London Lancet.*

it was found necessary occasionally to suspend the use of the drug for some days on account of its toxic effect. The patient is now quite well. She has gained flesh and health to such an extent that it is difficult to believe that she is the same person who was operated upon two years and four months ago. There is no trace of the disease to be discovered.

Remarks by Mr. Page—Such are the facts. It may be that this case is a vagary of recurrent cancer, but taken in conjunction with the cases of recurrent carinoma reported by Dr. G. Beatson, of Glasgow, in all of which thyroid extract was given, I consider it to be one of great importance and interest, so much so that I intend to try the persistent administration of thyroid extract in every case of recurrent or inoperable carcinoma of the female breast coming under my observation. In due course I trust to record the results of the experiment, and, in the meantime, the case is reported in the hope that it may induce others to give the treatment a trial.

Remarks by Dr. Bishop.—I am much indebted to Mr. Page for permission to add the following remarks :—When, despite the completeness of the first operation, the growth returned three months later, and when only three weeks after the second operation it again made its appearance, the case looked hopeless. It was then that in sheer desperation I determined to try thyroid extract, having read Dr. Beatson's papers,* notwithstanding his opinion that it has "little effect when given alone." Mr. Page cordially approved of the experiment. At first it did not seem to have any effect, but it was soon apparent that no increase in size was taking place, and the patient maintained—rightly, I think—that the growths were softer. In the spring of last year, however, about six months after the treatment was commenced, a lump appeared above the operation scar and grew rapidly till it was as large as a walnut, when it seemed to cease growing. I did not examine the breast from Christmas of last year (when, in addition to the growth just mentioned, there was a number of nodules in and about the scar and a group below it in the subcutaneous fat), until April 18 last, when I was amazed to find that every trace of the growths was gone. I at once informed Mr. Page, and he immediately went to see the patient, and confirmed my observation.

It is always dangerous to draw conclusions from a single case, but if thyroid extract had no effect upon the growths, to what is their disappearance due? And if beneficial results from its use are, as Dr. Beatson maintains in his papers, de-

* *The Lancet*, July 11, 1896, p. 104, and July 18, 1896, p. 162.

pendent on a previous oophorectomy, why should it alone not succeed after the menopause has been passed? If it is really, and of itself, of utility in carcinoma of the breast, then it ought also to be of service in carcinoma of other parts of the body, and I suggest its trial in inoperable cases when the growth is situated elsewhere than in the mamma. In this connection, also, it would be interesting to know whether the subjects of thyroidectomy, or those in whom that gland is functionally inactive, are peculiarly liable to carcinomatous growths. I am not aware that such is the case. It would also be interesting to get information as to the condition of the thyroid gland in the subjects of this disease. How the thyroid extract acts it is very difficult to surmise. Whether it alone, or in conjunction with the menopause (either naturally or artifically produced), tends to promote a fatty degeneration of the carcinoma cells, or by stimulating the lymphatics to remove the carcinomatous material (to which theory there would seem to be obvious objections), or by increasing metabolism enables the phagocytes to cope with the disease, or acts in some other way, further data can alone supply facts for a decision.

Not the least puzzling feature of the above case is the development of a growth during the treatment. At the time, however, the patient, was suffering great anxiety, owing to the illness of her husband, and was constantly up at night. The general health suffered much, and it is possible that the thyroid tabloids were neglected. What we learn from this, and I think also from Dr. Beatson's cases, is that to do any good the administration of thyroid gland must be pushed to its full physiological effect and continued over a great length of time. *Gaillard's Medical Journal*, July, '98.

ABRUPT REDUCTION OF POTT'S KYPHOSIS.

Jonnesco, of Bucharest (*Arch. de Sci. Méd.*, 1898 (III.), 1-2, p. 1), reports thirteen cases of this operation, illustrated with nine photographs. He believes that it is an excellent operatory procedure, specially adapted to young subjects and recent cases. It should always be associated with extension and counter-extension, but no accessory cutting operation should be undertaken. Manual traction should not be used, but, instead thereof, mechanical traction, applied only at the head and pelvis, the force exerted being an average of 45 to 50 kilogrammes. Only in old ankylosed cases is the employment of force up to 80 kilogrammes permissible. Chloroform should be sparingly given, enough only being used to carry patients through the operation proper.—*Medical Review of Reviews.*

PARTIALLY UNITED FRACTURES OF THE TIBIA.

Müller (*Centralblatt für Chirurgie*, June 5th, 1898) has repeatedly noticed that after apparently good union, with good callus formation and absence of pain, patients complain that the affected limb will not support their weight. In such cases skiagraphy reveals the fact that the broken ends of the bone are partially dislocated laterally. While by manipulation there is observed an abnormal elasticity of the shaft of the tibia, the sensation of non-support is largely psychical. Müller puts these cases upon a supporting splint-dressing, which enables them to walk.—*Medical Review of Reviews.*

APPENDICITIS—A POSSIBLE CAUSE—THE USE OF THE LIGATURE—IS IT NESSARY?

In a paper read before the Richmond Academy of Medicine and Surgery by Wm. T. Oppenheimer, M.D., President of City Board of Health, Richmond, Va., he says (*North Carolina Med. Jour.*), July 5th, 1898:

"The question is asked: Why do we hear more of appendictis now than formerly? I would aneswer that the disease was not so well known, and that possibly as much existed then as now, but under different names—*e. g.*, many cases formerly diagnosed as peritonitis were fulminant appendicitis. But, nevertheless, I claim the disease is more frequent now. Possibly the cause may lie in improper food. Bread is the most common food, and the common baking powder used has caused more and different varieties of indigestion than formerly, probably affecting the digestive juices. I bring this out, although I have no statistics to prove it, for I believe that appendicitis is nothing more than indigestion in the appendix. Authorities on the subject refer to the blood vessels, sex, etc., when naming the causes. The point I wish to make is that it is the result always of an accumulation of gas, never of plugging of the artery or sloughing. I believe that the capillaries are so numerous that even with blocking of the artery collateral circulation is soon established.

"In every case of appendicitis the patient is more or less dyspeptic. It may even be his first attack. The resulting gas accumulating in the cecum, the appendix becomes blown up and its orifice is blocked. In recurrent cases the orifice may be more and more narrowed with each succeeding attack, until it is finally occluded; the circulation is cut off entirely if the distance is great, and sloughing results.

"In forcing gas into the cecum the appendix in more distended at its apex than elsewhere, and least at its orifice,

because of the presence of circular muscular fibers. Constant pumping in of gas may result in partial closure only, and adhesions may form; but when there is complete closure the fulminant variety is produced, and, going on, protective abscesses. This statement regarding closure in the fulminating form must be so, because where the appendix is filled with pus, if it were not entirely sealed, there would be drainage into the cecum, and it would be recurrent. To attest my belief in it I have operated for appendicitis without using the ligature. Of course, in the recurrent form, where the operation is done between the attacks, the ligature should always be applied. The danger from it is that it might not be applied near enough to the cecum, leaving pus which may result in septicemia, peritonitis, etc. In safe hands the operation is less dangerous without than with the ligature.

"The points brought out have great bearing on the treatment, namely, food. Indigestion of all forms have the closest attention, for the first seizure may bring on an attack of appendicitis."—*Medical Review of Reviews*, August 25, 1898.

WHAT PRODUCES ANKYLOSIS OF JOINTS?

Dr. O. W. Phelps, Britt, Iowa, in a paper appearing in the *Railway Surgeon*, July 26th, cites a number of interesting experiments made by him in order to determine this question, after a review of which he says:

"The conclusion in my mind is clear—1. That motion is not necessary to preserve the normal functions of a joint. 2. A normal joint will not become ankylosed by simply immobilizing it for three or four months. 3. Atrophy of the muscles of the limb will follow prolonged immobilization of a joint. 4. These experiments have demonstrated to me conclusively that prolonged fixation will not produce ankylosis of a normal joint, and that motion is not essential for the preservation of normal functions.

"Then the cause of ankylosis must depend upon pathological conditions, and not upon fixation.

"The question of ankylosis, in my mind, is determined by the severity of the inflammation, the duration of intra-articular pressure, and destruction of periosteum. I believe that the motion of an inflamed joint interferes with the process of repair and hastens ankylosis, and to prevent this calamity it is the duty of the surgeon to put the limb at absolute rest and relieve intra-articular pressure by extension and immobilization. Inflamed joints treated by absolute rest will furnish far fewer cases of ankylosis, better motion and less deformity."—*Medical Review of Reviews*, August 25, 1898.

STRICTURE WITH EXTRAVASATION IN WHICH SUPPURATION OCCURRED BEHIND THE PUBES.

Bruce Clark reports a case of stricture (*Med. Press and Circ.*, No. 3075) through which no instrument could be passed. A rectal examination revealed the fact that there was a great deal of thickening about the region of the prostate and vesiculæ seminales, as well as in the region of the triangular ligaments, probably a tuberculous complication. The stricture was relieved by a Wheelhouse's operation. A week later the temperature gradually rose, the patient developing some tenderness below the pubes. On further examination by means of a probe passed in from the seat of the wound, pus was found. An incision was made above the pubes, and a counter-opening down to the side of the rectum so as to drain the pelvis, which proved to be full of pus. The pus having also found its way up behind the peritoneum into the lumbar region, another counter-opening was made just below the last rib. The whole cavity was well irrigated with izal (1-200), drainage-tubes being inserted. The author points out that the thickening which had originally been felt round the prostate was undoubtedly the beginning of an extravasation backward round the base of the bladder, a rare complication of stricture, and one which is generally regarded as an almost certainly fatal one. The draining of the bladder by the first operation had not availed to prevent the onset of suppuration, owing to the slow infiltration of the cellular tissue round the bladder, which had taken place before the patient had presented himself for treatment. It was the only case he had seen in which such extensive suppuration had resulted from such a cause. The patient recovered, convalescing gradually.—*American Medico-Surgical Bulletin*, August 25, 1898.

DIAGNOSIS OF RENAL PERMEABILITY BY METHYLENE BLUE.

Castaigne (*Gaz. des Hopitaux*, June 14th, 1898), one of the pioneers in the study of this subject, sums up all that is known about it to date. He says that the possibilities in this direction have long been apparent, because of the impermeability of diseased kidneys to many medicinal substances. The difficulty has always been in the choice of a drug adapted to practical needs. In methylene blue we have an ideal substance. Its subcutaneous injection is not attended with pain or danger; in its passage through the body it is not subjected to any essential decomposition; its

color is readily appreciable and cannot be mistaken for anything else; and, finally, its use is not incompatible with the administration of other drugs for medicinal purposes. The practical worth of the test has been proved by the numerous articles which continue to appear upon the subject. Surgeons resort to its use before giving chloroform, and even use it in conjunction with catheterism of the ureters to determine the permeability of either kidney. Obstetricians use it to determine the likelihood of eclampsia. It is frequently resorted to in the hope of determining the presence of hepatic insufficiency.

The technique is very simple. One c.c. of a five per cent. solution is injected under the skin, and the urine is voided. All subsequent urinations are performed methodically, at regular intervals, in separate vessels, and each specimen is at once examined, the first appearance and persistence of the blue being carefully noted. In healthy subjects the blue begins to appear within a half hour. The maximum is attained by the third or fouth hour, and all traces vanish in from thirty to forty hours.

In acute and chronic nephritis the permeability is sometimes normal, or even increased, In other cases the blue goes through the kidney in the form of chromogene, which is colorless, but readily found by the beautiful green color which forms after boiling the urine with acetic acid. In atrophic nephritis the blue does not appear until the third or fourth hour, and may persist for a week. In the cardiac kidney permeability is normal as long as mere congestion is present, but after degenerative changes occur, the appearance of the blue is delayed to two or three hours. In intermittent albuminuria the blue appears at normal time, but is eliminated in a peculiar intermittent manner. In diabetes elimination is either normal or delayed. In hepatic subjects there is an intermittent rhythmic elimination, a fact of great physiological interest. In the various forms of surgical kidney, if the blue appears by the end of first honr, one kidney is believed to be sound. By catheterizing the ureters much may be learned at times. Permeability is normal in pregnancy, and even during eclampsia.

Castaigne gives a brief summary of the four types of results:

1. Intermittance, as in hepatic diseases.

2. Dissociation—the presence of chromogene means impermeability.

3. Prolonged elimination means organic disease.

4. Delayed appearance means impermeability.—*Medical Review of Reviews*, Aug. 25, 1891.

Medical Society Proceedings.

COLLEGE OF PHYSICIANS AND SURGEONS, PROVINCE OF QUEBEC.

The regular September meeting of the College of Physicians and Surgeons was held on the 28th, at Quebec, in the Hall of the Faculty of Medicine of Laval University.

Present:—Doctors E. P. Lachapelle, President; Robt. Craik. Laurent Catellier, Vice-Presidents; A. R. Marsolais, Registrar; A, Jobin, Treasurer; J. P. Boulet, J. A. Macdonald, Secretaries; and the following Governors:—J. E. Baril, S. Bolduc, M. S. Boulet, T. L. Brown, M., Brophy, F. W. Campbell, L. J. V. Cléroux, J. Constantin, C. L. Cotton, T. Cypihot, A. Demers, J. L. Desroches, F. X. J. Dorion, Hon. R. Fiset, T. Fortier, Chas. E. Gingras, S. Girard, P. E. Grandbois, J. A. Ladriere, H. Lafleur, J. B. McConnell, Hon. D. Marcil, Chas. Marshall, L. P. Normand, E. F. Panneton, P. Pelletier, E. H. Provost, E. L. Quirk, L. J. A. Simard, L. J. O. Sirois, Eug. Turcot, A. Vallée, A. N. Worthington.

The meeting was opened at 10.15, Dr. E. P. Lachapelle, President, in the chair.

Dr. J. P. Boulet acted as Secretary.

The minutes of the regular meeting of the 6th July and special meeting of July 13th were read and confirmed.

The Treasurer presented his report, which was adopted. A summary follows:

Financial statement of College of Physicians and Surgeons, P.Q., on Sept. 28th, 1898.

12th July, '98 (after auditing), balance in bank	$7,732 49
July 13 to 14, '98, paid by Dr. L. Larue (ex-Treasurer)	270 44
Balance.....	$7,462 05

RECEIPTS.

August 4, 1898.

Received from Dr. L. Larue (balance in Banque Nationale)	$7,462 05
License fees.....	1,100 00
Preliminary Examinations.....	970 00
Annual fees.....	66 00
Balance received from Dr. A. T. Brosseau.....	136 00
Received from Dr. Austin.....	50 00
Interest on deposit.....	6 76
	$9,790 81

EXPENSES.

Governors' fees	$ 60 00
Assessors' fees	190 00
A. Déom, agent, and Mr. Girouard, salary and commission	225 00
Notices and printing	554 72
Books and binding	65 10
Returns	200 00
Examiners' fees and expenses	386 00
Dr. A. T. Brossure, Secretary's salary to July, '98	250 00
Guarantee insurance, 4 officers	80 00
Stationery	12 50
Miscellaneous	11 00
	$2,034 32
Total Receipts	$9,790 81
Total expenses	2,034 32

Balance in bank $7.756 49, besides 5 shares of Bank of Montreal Stock, market price $488 00 each.

(Signed), ALBERT JOBIN,
Treas. Coll. P. & S., P. Q.

Dr. L. J. A. Simard moved, seconded by Dr. M. S. Boulet and Dr. F. W. Campbell:

"That the members of the College have heard, with very great pleasure, that the French Government has conferred on Dr. E. P. Lachapelle the title of Chevalier de la Legion d'Homeur, and that they take advantage of this occasion to tender him their most sincere congratulations."

Carried unanimously.

The President, in a few words, thanked the members.

Moved by Dr. F. W. Campbell, seconded by Dr. J. A. MacDonald:

"That the President is hereby authorized to place on the frame of the portrait of S. Arnoldi—the first President of this College—now in Laval University, in Quebec, but the property of the College, his name, date of death and the fact of his being our first President.—Carried.

Moved by Dr. M. Brophy, seconded by Dr. Panneton:

"That the President and Vice-Presidents, each in his district, be authorized to administer the oath and deliver the license to those entitled to it after the adoption of the report of the Committee on Credentials."—Carried.

Hon. Dr. Marsil, seconded by Dr. L. J. Desroches, gives notice that at next meeting he will move that in future candidates presenting themselves before the Examining Board be obliged to pass examinations in Clinical Medicine and Clinical Surgery.

Report of Credential Committee read and adopted.

Those present at meeting of Credential Committee, held on 26th inst., were Doctors E. P. Lachapelle, President; L. Catellier, Vice-President; L. J. A. Simard, ex-President; A. R. Marsolais, Registrar; Albert Jobin, Treasurer; J. P. Boulet and J. A. Mac-

Donald, Secretaries ; F. W. Campbell and H. Lafleur, the last named representing McGill University in the place of Dr. R. Craik.

The following graduates possessed diplomas, certificates of preliminary examination and other qualifications conforming to the rules of the College, and were entitled to the license :

Archambault, Euclide ; Beaumier, Jos. Zephirin ; Bégin, Wilfrid ; Boisvert, Chas. E.; Boulanger, Théophile D.; Byers, Gordon ; Carron, Frederick Burke ; Chrétien, Jean Rémi ; Cook, Edouard ; Dion, Jules Alphonse ; Finnie, John H.; Forbes, A. MacKenzie ; Geoffrion, Louis ; Lavoie, Jos. Ernest ; Leclerc, Louis ; Lemieux, J. P. Cyrinus ; Maranda, Herménégilde ; Pelletier, Frs. Moise ; Taschereau, Gustave Arthur ; Warren, David.

Doctors Ed. W. Archbald, Wm. Delaney and E. Turgeon have complied with all rules, and are entitled to the license, but have not received it. It will be delivered to them.

The following must submit to a professional examination :— Drs. R. Beauchesne, J. N. Boivin, N. Boucher, E. R. Brown, E. S. Harding, Thos. Lovitt, C. B. Rouleau.

The following gentlemen have sworn to their diplomas, and are entitled to certificates of preliminary examination :—M. Roméo Beauchesne, B.L.; Jos. E. Bibaud, B.L.; Jos. Dominique Achille Chouinard, B.L.; Wm. LeMesurier Carter, B.A.; Désiré Houde, B.L.; Wilfrid Laberge, B.L.; J. Albert Paquet, B.A.; J. W. Leopold Ricard, B.L.; J. Omer Royer, B.L.; L. Dubois, B.L.; Paul Emile Rochon, B.A.: Edouard Verdon, B.A.; Gabriel Brisset, B.A.; Joseph Ayotte, B.L.; Antonio Gauthier, B.L.; Hubert Martel, B.L.; Arsène Christin, B.L.; Azarie Turcotte, B.L.; Armand Beuuséjour, B.A.; Ernest Gagnon, B.L.; Jos. L. L. Gagnon, B.L.; Jos. Wilfrid Collerette, B.L.; Hormisdas Ethier, B.A.; Ernest Rudolf Brown, B.A; Ernest Stanley Harding, B.A.; Wilfrid Comtois, B.L.; D. Omer Choquette, B.L.; Geo. Thibault, B.L.; Olivier Demers, B.L.

Thirteen candidates went up for the preliminary examination, of whom four were passed :—Messrs. Jos. Dobbin, J. A. Pilon, V. H. Cullen, V. Painchaud.

Several candidates having paid the fees, either for preliminary examination or for license and not having appeared, the committee recommends the adoption of the following resolution :

Resolved—That the President be authorized to submit to the decision of the legal adviser of the College the following question :

When a candidate for preliminary, or professional examination, or for license, neglects to pass such examination or receive such license, has he a right to the return of the whole of the fee or only to one-half as in case of failure ?

" The President to be guided by the opinion of the Legal adviser to the College."—Carried.

The Report of Committee on professional examination was then read and adopted.

The examiners appointed by the President were :

Hon. Dr. D. Marsil in Operative Surgery and Gynecology.
Dr. H. Lafleur in Pathology and Chemistry.
Dr. McConnell in Physiology and Histology.
Dr. A. Demers in Medicine.
Dr. L. J. A. Simard in Opthalmalogy, Otology and Laryngology.

Dr. L. Catellier in Surgery.
Dr. A. Vallée in Mental and Nervous Diseases, Medical Jurisprudence and Toxicology.
Dr. C. C. Sewell in Obstetrics.
Dr. L. J. Desroches in Hygiene.
Dr. L. J. O. Sirois in Diseases of Children.
Dr. L. J. V. Cleroux in Materia Medica and Therapeutics.
Dr. Cotton in Anatomy and Bacteriology.

In absence of Dr. Sewell, Dr. F. W. Campbell was asked to examine in Obstetrics.

Seven candidates took the examination of 27th inst.

One only, Dr. E. S. Harding, passed satisfactorily, and is entitled to the license.

The following letter was read from President of Pharmaceutical Association of Province of Quebec :

QUEBEC, SEPT. 28, 1898.

To the Governors of the College of P. and S., of P. Q.

GENTLEMEN :—As the sale and use of medicines of unknown formula is increasing year by year, and, in many cases, these articles are dangerous, it is of greatest importance that the sale of these preparations should be controlled by the Government more strictly than at present.

We therefore request the College of Physicians and Surgeons to appoint a committee to study this matter and report at next meeting.

The Pharmacists will be glad to assist this committee, and hope to receive the moral support of the Physicians in preventing any legislation tending to change the present law concerning the sale of drugs, etc., at least before the committee which you may name has reported.

A delegation from Pharmaceutical Association is in waiting should you wish to hear it.

Yours truly,

(Signed), R. W. WILLIAMS,
Pres. Pharmaceutical Assoc. of Prov. of Que.

The deputation sent by Pharmaceutical Association was thereupon admitted.

The President informed the deputation that it was the intention of the College to appoint a Committee to study such questions, and that a common plan of action might be decided on if deemed advisable.

Dr. Baril gave notice that at next meeting of Provincial College he would move "That this College should have introduced a bill asking the Federal Government to enact a law as follows :

1. To abolish the right to manufacture, import and sell in the whole Dominion any form of secret remedy.

2. To revise the list of poisons and substances acting as poisons in certain circumstances.

3. To oblige the holder of any trade mark, etc., allowing sale of a remedy containing one or more toxic substances, to specify on the label or wrapper the name and quantity of each ingredient ;

the sale of such a preparation being subject to rules established by a medical commission appointed for the purpose by Provincial Goverment.

At 1 p.m., on motion of Drs. D. Marsil and Desroches, the meeting adjourned till 2 p.m.

AFTERNOON SESSION.

At 2.15 p.m. the meeting resumed.

Dr. Marsolais read the following :

Report on projected auditing of the Books of former Board.

I regret that on account of not having all documents relating to finances of old Board, I am unable to present you to-day the report of the auditors appointed on 13th July last.

I may, however, say that the work preparatory to the auditing to be done by chartered accountants is well advanced—some parts, such as collection of annual fees, which is not the least important, being almost finished.

Only one ex-officer has formerly refused to deliver his books, except the list of receipts for annual fees which he has delivered to us. Dr. J. M. Beausoleil, the Registrar of the old Board, claims that these books and vouchers up to date of last auditing accepted by the then Board are his private property, and that he need not deliver them up to the new Board. He evidently forgets that these books form a part of the archives of the College whose property they are, and that, in consequence, the College has a right to claim them.

This refusal renders all the more difficult the revision and classification of the documents now in our possession, in that the ex-registrar, like others of the former officers, besides the duties pertaining to his office, often did the work of the Treasurer for which reason we are deprived of a number of documents necessary to the examination and the auditing of the affairs of the College.

As to the other officers, we have reason to believe that they will willingly deliver to us any papers which may still be in their hands. We intend to take the steps necessary to obtain these, and believe we have lately received all the documents held by one of them.

I am convinced that, as soon as the present Board has obtained possession of all necessary books and vouchers, the auditors appointed will be able to begin their work, and, making use of the preparatory work of compilation and classification already done, to promptly complete the auditing of the finances of the College from 1889 to 1898. They will then be enabled to submit a report which will allow you to judge of the situation and take what steps you may consider necessary.

(Signed), A. R. MARSOLAIS, M.D.,
Registrar Coll. P. and S., P. Q.

Sept. 28, 1898.

The report was adopted.

Moved by Dr. L. A. Demers, seconded by J. P. Boulet :

Whereas, the books and documents relative to the administra-

tion of the funds of the College of P. and S. of the Province of Quebec are incomplete and do not show, for the last ten years, all the receipts and expenses of the College, and

Whereas, the late Registrar, Dr. J. M. Beansoleil, has detained several of the account books, bank books and vouchers necessary to a complete auditing of the books of the College, and has illegally retained possession notably of the book showing receipts day by day and item by item handed to him, and

Whereas, Dr. Beausoleil has not furnished according to law a report of the disposition he has made of the funds of the College during his term of office as Registrar;

Resolved.—That the President be authorized to have instituted, in the name of the College, against the said Registrar or any other officer, any action at law to oblige him or them to deliver up the books of the said College and render a just and true account of the disposition he has made of the funds of the College during his term of office as Registrar; and that the President be authorized, in the name of the College, to defend any action which may follow, and that he be authorized in the name of the College to plead in all these actions, whether as plaintiff or defendant.—Carried.

The President read the opinion of Mr. Gervais, advocate, in reference to the right the College may have of founding and maintaining a library for the use of its members, as follows:

RAINVILLE ARCHAMBAULT & GERVAIS, Advocates.

MONTREAL, 23rd August, 1898.

Having been consulted by the Board of Governors of the College of Physicians and Surgeons of the Province of Quebec, upon the following question:

Is the College of Physicians and Surgeons of the Province of Quebec bound to respect the lease passed on the 13th July, 1898, before Labadie, N. P., between the Board of Governors of the College and one, Minier, for the establishment of a library of medical works.

I reply as follows:

The solution of this question depends upon the solution of this other question:—Has the College of Physicians and Surgeons of the Province of Quebec the right to teach medicine, surgery and the obstretrical art in this Province?

The College may acquire and alienate moveable and immoveable property for the following purposes:

1. To regulate the duration and nature of the curriculum of medical studies;

2. To superintend medical studies in the schools established for this purpose;

3. To control the examination required to obtain medical degrees in the Universities;

4. To hold the examinations required to obtain licenses for admission to study or practice of those who have not obtained the degree of Bachelor of Arts or Licentiate of Medicine;

5. To keep the register of all the physicians and surgeons having the right to practice surgery and the obstretrical art in the Province.

These powers are more specially defined by articles 3969, 3982 and 3983 of the Revised Statutes of the Province of Quebec. Beyond them the College of Physicians and Surgeons has no power.

It is true that they would have the right to purchase medical works for the use of the assessors. But this construction extends the interpretation and the effect of the legislative powers concerning the college as far as it is possible to do so.

The assessors are presumed to know the science upon which the candidates for practice are examined.

They have no right to expect that they will be supplied by the College with the works required to learn the science of medicine, surgery and the obstretrical art·

The College couid merely buy for the use of the Assessors Vade-Mecums or Compendiums for the speedy verification of the answers of the students.

Beyond that, the buying power of the College does not extend.

Between this limited power of buying books and the desire to establish a public library, with or without the circulation of books, there is an immense difference.

The establishment of a library implies the power to teach medicine, which of itself implies the further power of incurring large expenses for that purpose.

These two powers are not conferred, either expressly or implicitly, by the law concerning the College of Physicians of the Province of Quebec.

We know, nevertheless, that public bodies, the local agents of the central or sovereign power, merely exercise the powers which are expressly conferred upon them by the laws governing them.

The College of Physicians and Surgeons has the power of controlling and superintending schools of medicine and the practice of medecine in lieu and place of inspectors who would be appointed either by the Legislature or the Executive Council of the Province.

The College of Physicians, like other bodies of professional men, was created about the period during which municipal corporations were created, with the same view of permitting any group of the nation to govern itself as far as possible.

The College of Physicians has neither the mission nor the right to establish a public library such as is referred to in Minier's lease, passed before Labadie, N. P., and bearing date July 13, 1898.

The late Board of Governors, in adopting the resolution authorizing the passing of this lease on the 8th July, 1898, have therefore acted *ultra vires*.

(Signed), HONORE GERVAIS.

I concur,

(Signed,) EUG. LAFONTAINE.

Moved by Dr. Cleroux, seconded by Dr. Desroches, and carried :—

Whereas the College of P. & S. of Prov. Que. has not the right to spend money to maintain a medical library, and especially to carry out the lease passed with Mr. Minier.

Resolved that the President be authorized to repudiate said lease between the College and Minier by notarial notice or

otherwise, the College retiring from such lease, not intending to resume it, and refusing to pay the stipulated rent, not having benefited and not wishing to benefit by it.

Moved by Dr. Desroches, seconded by Dr. Cleroux :

"That the situation of the library of the College be not changed from now to 1st May next, provided it cost the College nothing, and that, in case of Mr. Déom refusing to keep it until that date in his store, the President be authorized to place it elsewhere, free."—Carried.

Dr. Catellier moved, seconded by Dr. Cleroux :

"That the Council of Discipline be composed as follows :—The President and the Secretary of the district in which the sitting is held, who are ex-officio members, and Doctors R. Craik, D. Marsil, A. Vallee, C. C. Sewell."

Moved by Dr. Desroches, seconded by Dr. M. S. Boulet :

"That a Committee composed of Drs. Lachapelle, Marsil, Craik, Campbell, Catellier, Pelletier, Cleroux and the mover and seconder, be named to change the method of voting at the election of Governors, and to establish election by districts and by means of ballot."—Adopted.

Moved by Dr. M. S. Boulet, seconded by Dr. J. L. Desroches, and carried :

"That the Secretary of the Board be instructed to write to all the advocates who have been retained by the Board that their services will no longer be required, provided the President be allowed to make an arrangement with these gentlemen, if necessary, but only after having this resolution communicated to them."

Moved by Dr. Sirois, seconded by Dr. Marsil, and carried :

"That Mr. Honore Gervais be named Counsel for the College in all actions or suits in which the College may be interested."

Moved br Dr. Cotton, seconded by Dr. L. A. Demers, and carried :

"That the Registrar be instructed to notify each member of the College, at least a month before the 1st of July of every year, of the amount he may owe as annual dues."

Moved by Dr. Marsolais, seconded by Dr Lafleur, "That a Committee composed of the President, the Vice-President for Montreal and the Registrar be appointed to settle the question of the library, the salary of the Agent of the College, or any other urgent matter, with instructions to report at next meeting of the Board."—Carried on division.

Moved by Dr. Lafleur, seconded by Dr. Pelletier, and carried :

"That Mr. Siméon Moudon, of Montreal, be named Agent of the College in place of Mr. Avila Déom, with the understanding that his salary be left to the discretion of the committee provided for in previous motion."

A letter was read from Dr. Bouillon, of Matane, suggesting amendments to the law respecting Charlatans.

Moved by Dr. Baril, seconded by Dr. Panneton :—

1. That a committee, composed of Dr. S. Lachapelle, Brophy, Campbell, Desroches and Baril, be appointed to consider the question of the sae of secret preparations, whether under trademark or not, and to invite the Medical Boards of other Provinces

and the various Pharmaceutical Associations to assist in this undertaking if deemed advisable, and to report at next meeting of the Board.

2. That the Legislature of this Province be specially requested by this Board not to legislate in the matter of the sale of patent medicines before the Federal Parliament shall have considered the question."

It is to be understood that the members of this committee are not to expect any enumeration for this work.—Carried.

Moved by Dr. Marsolais, seconded by Dr. Simard, and carried :

" That the following gentlemen be those from among whom are to be chosen, according to law, the assessors for the examinations in the Universities of Montreal during the next three years :—

M.les docteurs Hon. D. Marsil, Rodolphe Boulet, E. P. Benoit, Triganne (de Somerset), Gauthier, E. Turcot, Joyal, Dubé, J. O. Beaudry, Lalonde, Provost (Sorel), Cléroux, Cotton, Worthington, Quirk, Brown, Prendergast *et* J. H. Bell.

Moved by Dr. Brophy, seconded by Dr. Bolduc, and carried :—

" That Drs. C. R. Paquin and F. J. Langlais be named Assessors for Laval University, in Quebec, jointly with those already named at the last meeting, and that the officers for Quebec be instructed to assign them to duty as needed.*

Dr. Simard raised the question of Mme. Guertin, to whom a midwife's license was refused on July 6th last because of certain accusations made against her. The two sides of the question having been considered, Dr. Cotton moved, seconded by Dr. Simard, that a midwife's license be granted to Mme. Guertin.—Carried.

A communication from Dr. F. J. Bedard, of Weldon, County of Wolfe, alleged :

1. That, immediately after passing his professional examinations at Laval University in 1893, he removed to the United States, and did not return to Canada until last autumn, after the meeting of the Board.

2. That several times, notably in February last, he voluntarily offered, without having been requested, to pay the fee for the license.

3. That not having obtained the license, he counted on the tolerance usually practiced towards young physicians until the next meeting of the Board.

4. That meanwhile he was sued and condemned to pay $50 fine and $49.42 costs, which to him was a large sum.

In consequence he appeals to the indulgence of the Board and asks to have the fine remitted.

His request is supported by several physicians.

After discussion and without establishing a precedent, it was resolved on motion of Dr. Pelletier, seconded by Dr. Catellier, that the Treasurer be authorized to return to Dr. Bedard the sum of $50.

The Credential Committee, as nominated by the President, was confirmed in its powers for the next three years.

The Secretary was authorized to have the minutes of that

*Since the meeting Dr. C. R. Paquin and Dr. P. Faucher signified their inabllity to accept the position of Assessor.

meeting typewritten for transmission to and publication in the Medical Journals in this Province, and to have them translated and printed in both languages and distributed to each member of the College.

On motion of Dr. Provost, seconded by Dr. Turcot, a vote of thanks is passed to Laval University for the free use of its hall.

Dr. Cotton then moved, seconded by Dr. Worthington, that thanks be voted to the President for the able and impartial manner in which he had conducted the meeting.—Carried.

There being no further business to be brought up, the meeting adjourned at 4.45 p.m.

THE CAUSE OF LAUGHTER.

Bain suggests the explanation that laughter is provoked by what he calls a degradation, meaning that we laugh when we all at once perceive something degrading, a trickery, a weakness, or a pettiness in some person or object which we respect; as when the infirmities of human nature disclose themselves in a person of importance, or when some trivial affair occurs in a solemn ceremony to drag us down, or when the wrong side of some great thing or some great man is exposed. "The occasion of the laughter is the degradation of a dignified person or interest, under circumstances that do not excite a stronger emotion. In all theories of laughter the more or less important fact is marked . . . that the feeling of the ludicrous arises when something which we respected before is presented in a mean light; for we have no disposition to laugh when something that we already regarded as such is depicted as tricky and vile."—*From The Psychology of Laughter, by* CAMILLE MELLINAND, *in Appletons' Popular Science Monthly for July.*

THE

CANADA MEDICAL RECORD

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Editorial.

HYGIENE IN SHAVING AND HAIR-DRESSING PARLORS.

The Board of Health of the Province of Quebec has issued a circular, and caused it to be published in the newspapers (a copy of which we give below), which in a commendable manner aims at mitigating a well-recognized source of danger in regard to the spread of infectious diseases. The dangers to which persons are exposed in the manner indicated by the circular are not appreciated by people generally, and a single publication in the daily papers is hardly sufficient to educate the ordinary mind to the real danger incurred by their barber using the same instruments promiscuously without proper cleansing. It will only be when the public demand the changes indicated, that barbers will take the necessary precautions and carry out the directions so scientifically tabulated in the circular. A properly-educated public will go farther than the barber shop. They will enquire whether the restaurant-keepers disinfect the eating utensils which are used several times daily by different people. Whether dentists render aseptic the instruments which enter a dozen or more mouths each day. Danger on these lines lurks on all sides ; even the sacred book in our Court-houses may be the medium of conveying disease from one mouth to another, and the parched wayfarer who may

quench his thirst at a public fountain may, unconsciously, with the refreshing waters imbibe specific contagion from the drinking cup. We heartily endorse the action of the Board in sounding this warning note, and hope they will not cease their agitations with the present efforts, but will continue to rouse the community in regard to the great dangers that insidiously lurk and claim victims who are unconscious of the existing perils.

Beyond all doubt, anyone who patronizes a barber or hairdresser, whose establishment is open to all comers, runs great risk of becoming infected with disease, from the razor, shaving-brush, scissors, clipper, comb or hair brush having been previously used on a sick person or even on a corpse.

That the chance of contagion is much less when the establishment is well kept, we most willingly admit; that the danger of infection is minimized in first-class establishments, we also concede, but the truth, nevertheless, obliges us to declare this :—

At the present moment, in the whole Province of Quebec, there is not a single barber or hairdresser who can honestly say that his instruments are absolutely, completely and scientifically safe in regard to the possibility of conveying infection.

Should a barber or hair-dresser recognizing the danger of transmitting, by the use of his instruments, certain infectious or parasitic diseases, amongst which may be mentioned that most terrible, and at the same time, perhaps, most frequently met with disease : Syphilis, be willing to take the necessary antiseptic measures and to offer to his customers a guarantee of the most minute cleanliness conscientiously carried out, he may rest assured of an immense increase of his clientele, as the people of this province are now thoroughly aroused to the necessity of taking preventive measures against contagious disease in all forms.

What then should be done to put hair-dressing parlors in a desirable hygenic condition ?

The Board of Health of the Province of Quebec which has the supervision and care of the public health in this province thinks it opportune to make public the conclusions of a report, duly approved by it, which prescribes the best means of avoiding the dangers which necessarily arise from the use in common of the razor, shaving-brush, scissors, clipper, comb and hair-brush.

Instructions approved by the Board of Health of the Province of Quebec at its meeting of the 17th June 1898.

Whereas syphilis, and other diseases of the skin and scalp, may be propagated by the instruments and hands of barbers and hairdressers, the Board, after having carefully examined into the various suggestions made to date to prevent such danger and also into the discussion which has followed their publication, recommends the following measures :

I.—To ENCOURAGE CUSTOMERS to have each *his own instruments* (razors, soaps, brushes, etc.) and to make it obligatory in the

case of sick customers. It is also advisable, in the interest of the barber himself, to attend sick customers at their own homes.

II.— DISINFECTION OF RAZORS, COMBS AND CLIPPERS.—

(As the processes of disinfection hereafter described may sometimes spoil tortoise-shell, celluloid, horn combs or razor-handles, metallic combs and razor handles should be used in preference.)

Immersion, immediately after use, in an enamelled or galvanized sheet-iron dish containing, *either :*

1° A solution of carbonate of potash (one per cent.) which does not spoil the edge of razors, *or ;*

2° Soapy-water (soapy-water preserves steel instruments from rust, provided, however, they be completely covered by the water).

Boil the solution of carbonate of potash or the soapy-water in which the instruments have been placed for 15 minutes, by putting a jet of gas or a coal oil lamp under the dish.

It must not be forgotten that, by disjointing the scissors and clippers, their disinfection and cleansing is better effected. Scissors which are very easily taken to pieces are found on the market ; and with regard to clippers, the preference should be given to models which can be easily taken apart.

Dipping instruments in alcohol, followed by ignition (instantaneous process) and the immersion in solutions of corrosive sublimate or carbolic acid, which processes have been recommended, are now abandoned as they are apt to spoil the instruments.

III.—DISINFECTION OF BRUSHES.—Deposit brushes on gratings in a small closet or case which closes hermetically and in which is kept a saucer constantly filled with a solution of *formaline* (one ounce for every cubic foot of the closet.) The brushes are disinfected after two hours' exposure to the fumes of formaline, but they may without inconvenience be left in the closet all the time they are not in use. They should be cleaned every evening with bran, clay, etc.

The way to obviate the necessity of disinfecting brushes is to dispense with their use. Even when the brush is perfectly disinfected, a great number of customers would prefer the hair-dresser not to use it at all, or at least that he should use it only after consent has been given by the customer.

IV.—PURIFICATION OF THE SHAVING BRUSH.—The shaving-brush can be also dispensed with, as instead one can use a ball of cotton-wool which is thrown away immediately after using. In any case, the shaving-brush should never be used before the bristles have been immersed for a few minutes in *boiling* water.

V.—PURIFICATION OF THE HANDS.—Before passing from one cusomer to another, the barber or hair-dresser must wash his hands, *using soap and nail-brush ;* carbolic soap to be preferred.

VI.—THE POWDER-PUFF will be replaced by a ball of wadding, thrown away immediately after being used, or still better by a powder-blower.

VII.—THE ALUM STICK frequently used to stop the flow of blood will be reduced to small pieces, so that each piece be used for one customer only. Calcined alum, a powder which can be applied on cotton-wool, which should be thrown away immediately afterwards, is much preferred by most people.

VIII.—LINEN.—Only strictly clean linen (towels, wrappers [*peignoirs*], etc.), will be used for each customer. If a freshly laundried wrapper cannot be supplied for each customer, discard it and use simply a clean towel. The customer will prefer having his own hair fall on his clothes than to have around his neck a wrapper which has only been shaken since the last customer had it on.

IX.—CLEANING THE HEAD AFTER CUTTING THE HAIR.—If the scalp is not washed, use only the comb to clean the head. The use of a stiff brush to clean the roots of the hair followed by the use of a soft brush or duster on the scalp and face is to say the least very disagreeable to most customers.

X.—Immediately after cutting the hair, SPRINKLE THE FLOOR with wet saw-dust and use a mechanical broom, the receptacle of which should be emptied into a covered bucket. The contents of the bucket should be burnt every evening.

XI.—RAZOR STRAPS.—The only way to disinfect them would be to expose them to the fumes of Formaldehyde (Formaline); but, as this is not a very convenient method, one must avoid contaminating them. To this end they should only be used for razors which have been previously disinfected, and, therefore, the barber should never stop shaving a customer to strap the razor he is actually using.

XII.—THE USE IN COMMON OF THE SAME VASELINE POT should also be avoided. It is better not to use any vaseline, unless the hair-dresser is prepared to use a spatula to take the vaseline out of the pot or bottle, being careful not to apply directly said spatula to his contaminated hands.

XIII.—Finally, SPONGES should never be seen in shaving or hair-dressing parlors. Although they may be disinfected in a solution of bichloride of mercury (a 1000th solution), they will always be looked upon as suspicious and disagreeable by refined customers.

BRITISH PHARMACOPŒIA.

RESOLUTION :—Whereas a revised edition of the British Pharmacopœia has been issued containing numerous and important changes, and, whereas, uncertainty exists as to the date under the British Pharmacopœia, 1898, is to be considered in force.

RESOLVED :—That the Canadian Medical Association in annual meeting assembled recommends that October 1st, 1893, be taken as the date on and after which, in the absence of instructions otherwise, physician's prescriptions should be compounded with the preparations of the British Pharmacopœia of 1898.

Correspondence.

To the Editor of THE CANADA MEDICAL RECORD :—

Sir,—Now that the governing body of the College of Physicians and Surgeons of Quebec has been resuscitated, and let us hope had a new and proper energy imparted to it, I may be permitted to say a word with regard to the *Medical Register*. I have no hesitation in remarking that the two editions of the *Register* issued by the College—I have seen two only—are a delusion, to use a mild term, to any business institution. They are full of errors, incompleteness and emptiness. I speak feelingly for I have to refer to one almost daily, and it is a source of constant disappointment to me. I trust if a new one be issued, greater care than has been used hitherto will be exercised in its compilation.

T. SIMPSON.

I fully endorse the comments of Dr. Simpson, who is Medical Referee for the Equitable Life. As Medical Referee for the New York Life, it seldom gives me the information I seek and which it ought to give.

F. W. C.,
Asst. Editor, C. M. R.

Book Reviews.

A Clinical Text-Book of Medical Diagnosis for Physicians and Students, based on the Most Recent Methods of Examination. By Oswald Vierordt, M.D., Prof. Medicine University of Heidelberg, formerly Privat-Docent at the University of Leipzig, late Professor of Medicine and Director of the Medical Polyclinic at the University of Jena. Authorized translation with additions by Francis H. Stuartt, A.M., M.D., ex-President Brooklyn Pathological Society. Fourth American edition from the fifth German, revised and enlarged, with one hundred and ninety-four illustrations. Price, cloth $4, sheep or half morocco $5. W. B. Saunders, 925 Walnut st., Philadelphia, 1898. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

The former edition of this work has held a high place in the estimation of clinical teachers and students. Its appreciation is evidenced by the fact that five editions have appeared within nine years from its first publication. The present edition has been

thoroughly revised by the author and brought quite up to date by its translator.

The introductory chapters give instruction for the examination of a patient in order to make a diagnosis. While not minimizing the great advantages of chemical and microscopical tests, he warns against too much dependence being placed npon them to the exclusion of a more purely clinical examination in which the individual as a whole is closely studied. Directions are given for getting the anamnesis or previous history of the patient and of the present disease.

The author makes a strong appeal in behalf of case taking, and quotes Coupland, who says, "Who can estimate how much we have lost from the fact that generations of men gifted with powers of acute and shrewd observation have passed away without leaving one record behind them? Memory should not be trusted to, the observation should be faithfully recorded. It forms habits of thoroughness in examining cases, the examination being more systematic. Memory which depends on attention and repetition is strengthened and the mind is developed and both knowledge and intellectual cultivation are acquired and clearness and power of thought are increased, and the material for the ascertainment of broad facts and generalizations, and by which one can make contributions to general medical literature, is thus stored for future assimilation." An excellent table is given as a guide for taking the anamnesis, examining the patient and for special examination, general examination of the patient in regard to the physical condition, position in bed, attitude and position, general structure of body and nutrition, skin and subcutaneous cellular tissues and the temperature and pulse.

Then follows chapters on the special diagnosis of the whole body, beginning with the respiratory apparatus. All the usual methods of physical examination are clearly and minutely described and illustrated, and in regard to aspirated fluid in pleurisy, its chemical examination is described, and in regard to sputum, the revelations of the microscope as an aid in diagnosis are given and freely illustrated by coloured plates and cuts. The examination of the urine chemically and microscopically is clearly described, the illustrations are not so good as others we have seen and that of the gonococcus in pus from the urethra is not sufficiently characteristic of the invasion of the leucocytes by the coccus. The section on the examination of the nervous system is very complete, and its careful mastery cannot fail to make the recognition of this interesting class of affections free from difficulty. The translator gives a resumé of Widal's method of diagnosing typhoid fever by Johnson's modification. The illustrations of the malarial parasite are much inferior to much that is extant. Although we do not see many marked changes from the last editions, the book is a conservative representative of the best and most modern methods of diagnosis.

A Clinical Manual of Skin Diseases—with special reference to Diagnosis and Treatment, for the use of Students and General Practitioners. By W. A. Hardaway, A.M., M.D., Pro-

fessor of Diseases of the Skin and Syphilis in the Missouri Medical College, St. Louis ; Physician for Diseases of the Skin to the Martha Parsons Hospital for Children, and to St. John's Hospital ; ex-President of the Dermatological Association. Second edition, revised and enlarged, with 42 engravings and 2 plates. Lea Brothers & Co., Philadelphia and New York. In one handsome 12mo. volume, 1898. Cloth $2.25.

This is a manual of 550 pages, neatly printed on good paper and well bound. The symptomatology, causes and diagnosis are first considered, in which are many useful points, such as the examining of a patient in a warm room with good daylight; the history of the case, occupation, not to neglect general symptoms ; the use of the thermometer and chemical analysis of urine, and the microscope's aid in detecting parasites, feigned diseases, etc. A short chapter on the local distribution of skin diseases is worth committing to memory. Treatment and classification are then considered. They are considered under the heads of Inflammations, Hæmorrhages, Hypertrophies, Atrophies, New Growths, Neuroses, Disease of the Appendages of the Skin and Parasitic Diseases. The articles are terse and contain the essential points in symptomatology and diagnosis, and practical directions are given in treatment, representing the latest views in this regard. Numerous formulæ appear which are of exceeding value to the student and beginner as well as the busy practitioner.

An American Text-Book of the Diseases of Children, Including special chapters on essential surgical subjects :— Orthopædics, Diseases of the Eye, Ear, Nose and Throat, Diseases of the Skin, and on the Diet, Hygiene and General Management of Children by American teachers. Edited by Louis Starr, M.D., Consulting Pædiatrist to the Maternity Hospital, Philadelphia; late Clinical Professor of Diseases of Children, in the Hospital of the University of Pennsylvania, etc., assisted by Thompson S. Wescott, M.D., Instructor in Diseases of Children, University of Pennslylvania ; Visiting Physician to the Methodist Episcopal Hospital ; Physician to the Dispensary of the Children's Hospital, etc. Second Edition revised. W. B. Saunders, 925 Walnut st., Philadelphia. Price, cloth, $.800 ; sheep or half morocco, $9.00. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

Few books in Pædiatrics have received such favour as was accorded the first edition of the American Text Book. It has been a guide and consultant to both general practitioner and specialist, and thoroughly fulfilled the object given by its publishers in being a working text book, closely limited to, but completely covering the field of Pædiatrics. In this edition there are over twelve hundred pages, some fifty more than in the first. There are sixty-five authors, each of whom contributes one to several articles, each being an authority on the subject allotted to him. Among these are such well-known names as Samuel S. Adams, A.M., M.D. ; John Ashurst, jun., M.D. ; Chas. M. Burr, M.D. ; Henry Dwight Chapin, M.D. ; Floyd M. Crandall, M.D. ; J. M. Dacosta, M.D., LL.D. ; Geo. E. DeSchweinitz, M.D. ; William A. Hardaway, A.M., M.D. ; Chas.

K. Mills, M.D. ; John H. Musser ; Wm. Pepper, M.D., LL.D. ; Frederick C. Shattuck, M.D. ; J. Lewis Smith, M.D. ; M. Allen Starr, Louis Starr, M.D. ; James Lyon, M.D. ; J. William White, M.D. ; James C. Wilson, M.D. ; and Wm. Osler, M.D. In regard to the changes from the first edition, the whole subject matter has been carefully revised, new articles have been added and a number entirely rewritten. The new articles include Modified Milk and Percentage Milk Mixtures, Lithæmia and a section on Orthopædics. Those re-written are Typhoid Fever, Rubella, Chicken-pox, Tuberculosis, Meningitis, Hydrocephalus and Scurvy, and extensive revision has been made in the chapter on Infant Feeding, Measles, Diphtheria and Cretinism. The work is very freely illustrated with colored plates, photogravures and wood-cuts. In the introduction, the clinical investigation of disease and the general management of children is taken up, and the subject of feeding, bathing, clothing and sleep. The chemistry of milk and of artificial foods for children, modified milk, sea air and bathing in convalescence ; then injuries incident to birth and diseases of the new-born, diathetic diseases, infectious diseases, diseases of the blood, digestive organs, nervous system, respiratory system, heart, genito-urinary system, orthopædics, diseases of the skin, ear and eye. All these subjects are written by specialists, and give us the modern and most recent information bearing on these affections. In those of the skin, beautifully colored plates help to make the text understood, and assist greatly in enabling the student to diagnose these affections.

In intubation of the larynx, besides the lucid explanation, cuts of each instrument are shown and the method of using them and introducing the intubation tube shown. The articles on the various diseases of the nervous system are written by a number of specialists in the department, and give a full and lucid presentation of this affection. Scorbutus is brought up to date, not only are patent foods condemned, but condensed milk, the writer thinks, should be classed with the other proprietary foods, no cause has yet been discovered. There is deprivation of something not yet known, but contained in fresh milk and fresh fruit juice. Cuts showing the subperiosteal hæmorrhage and the characteristic attitude of the legs are given. These series of massive and comprehensive text books are the finest ever issued by any publishing house, and in the new editions of Gynæcology and the present work just published (and this will probably soon extend to the entire series), with the additions and revision, we have the latest and most complete representations of the various subjects of medical study included in those branches.

Elements of Histology. By E. Klein, M.D., F.R.S., Lecturer on General Anatomy and Physiology, and J. S. Edkins, M.A., M.B., Joint Lecturer and Demonstrator of Physiology in the Medical School of St. Bartholomew's Hospital, London. With 296 illustrations. Revised and enlarged edition, cloth, $2.00. Lea Bros. & Co., Philadelphia and New York.

The last edition of this work was published in 1889. Much has been learned since then, more especially in regard to the cell and the nervous system. And while all parts of the book have been revised and had incorporated the advances made, the chapters on

the nervous system show the greatest change, and occupy some one hundred and thirty-four pages out of the total of four hundred and eighty-eight.

The book is very freely illustrated with a very superior quality of wood cuts and photograms. The text is entirely descriptive, no histological methods are included; but as a compact convenient book for student and practitioner in regard to the minute structure of the human body, it meets every requirement, and represents the most recent additions to this branch of study.

Guide to the Clinical Examination and Treatment of Sick Children. By John Thompson, M.D., F.R.C.P., Edin., Extra Physician to the Royal Hospital for Sick Children and Lecturer on the Diseases of Children in the School of Medicine of the Royal College, Edinburgh. With fifty-four illustrations. Lea Bros. & Co., Philadelphia and New York.

Dr. Thompson has in this little volume of some 324 pages presented us with a practical *résumé* of the methods of treating diseases peculiar to children. Diseases of children he thinks should not be studied until familiarity with the same affections in adults is gained. It is only through the field of clinical medicine that this subject can be reached and understood. It is in diseases of children that the physician's services are most frequently required, disease is then seen in its most frank and least complicated forms. Their affections are more completely under control, and the largest number of therapeutic successes are obtained. To be successful, the physician must possess a thorough grasp of the ordinary clinical methods.

Tact is necessary; this is sometimes instinctive, may be acquired, or may not come to those who do not like children, and he must be familiar with the chief anatomical and physiological peculiarities of childhood and have some knowledge of the nature and causes of the diseases commonest among children.

This information is given in the pages which follow. There are sixteen chapters.

The first one on growth and development is very interesting; reference is made to growth in weight and length, the development of the various glandular organs, and of the senses and their testing for clinical purposes, development of the voluntary motor functions, sleep, and, if sick, teeth.

Then on general clinical examination, clinical history and physiognomical diagnosis. Others follow on the examination of the head, neck, abdomen, fæces, back and limbs, skin, urinary system, heart, lungs and nervous system, mouth and throat.

The final chapters treat of infant feeding, nursery hygiene, therapeutics and food disorders. The volume is replete with practical information respecting the essential points in the management of the diseases of children, and contains about all that is required when associated with the ordinary text book of medicine.

In most of the text books on pediatrics much is found which is a repetition of what is found in one's books on the Practice of Medicine.

A Text-Book of Practical Therapeutics: With especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. DeSchweinitz, Edward Martin and Barton C. Hirst. New (seventh) edition. In one octavo volume of 770 pages, illustrated. Cloth, $3.75; leather, $4.50 net. Lea Brothers & Co., Philadelphia and New York.

Few books have met with such phenomenal success as Professor Hare's text-book of Practical Therapeutics. Seven editions have appeared since its first issue in 1891, the last one (6th) being entirely exhausted in nine months. In the present edition the author has endeavoured, as in each of the others, to bring the subject matter in line with the advancement which is continually being made. The original object of his book, he states, was to present the physician and student with a well-digested and concise, yet practically careful statement of the best methods of treating disease. The book is divided into two parts. In the first remedies are discussed, and in the second diseases and their treatment. Some instructive general therapeutic considerations are taken up in the beginning, such as the modes of action of drugs and their administration; dosage; absorption of drugs; combinations for joint effects, idiosyncracy, indications and contra-indications and definitions, incompatibilities. A table of the classifications of drugs contains some twenty-eight groups, in which the remedies in each class are placed in their order of potency, the strongest being first. The different remedies are then taken up in alphabetical order, the author deeming this arrangement better owing to the present unsettled state of pharmacology which prevents a true classification, and also to afford the reader a ready reference book. In discussing a remedy, the chemistry or method of making or procuring it is not given. Its character is briefly described, then its physiological action—poisoning, therapeutics, contra-indications, untoward effects and administration. The preparation of both United States and British pharmacopœias are given.

In the next part remedial measures other than drugs are described, and foods for the sick, such as acupuncture, antitoxine, climatic treatment, cold as a remedy, counter irritation, disinfection, entero-clysis. Heat—in this chapter the hot foot-bath and Sitz bath are described and their uses pointed out. The Russian and Turkish bath and hot pack and the bronchitis heat and localized dry heat are all fully explained. Then, hypodermoclysis, intravenous injection, kataphoresis, lavage, leeching, rest cure, mineral springs and climate, suspension, transfusion and venesection.

A useful chapter is given on foods for the sick. In the final part diseases are taken up alphabetically and their treatment given, and from Dr. Hare's well-recognized standing as one of our leading authorities in this department of medicine one is not disappointed in finding this part giving only what is practical, all useless methods being eliminated. Numerous formulæ and terse directions characterize each article. The book entirely fulfils the aims of its author to be a practical guide in the treatment of disease.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By George Franklin Butler, Ph.G., M.D., Prof. Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Medical Department of the University of Illinois; Professor of General Medicine and Diseases of the Digestive System, Chicago Clinical School; Attending Physician Cooke's County Hospital, etc. Second edition revised. W. B. Saunders, 925 Walnut street, Philadelphia. Price, cloth, $4.00; sheep or half morocco, $5.00. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

This is an up to-date text book of some 860 pages, containing the most recent representation of all that is usually taught in a course on Materia Medica and Therapeutics. We still see that objectionable word Pharmacology in use, with a slightly modified definition as to what it means. Some other word should be coined to indicate the physiological action of drugs on the system. A very useful chapter on the untoward effects of drugs is given, and a lengthy table of the untoward effects of various drugs on lungs and heart, brain and cord, eye, ear and throat, skin and liver, kidneys and bladder. The subject of weights and measures is fully considered. Then a list of the various pharmaceutical preparations, extractions, preparations, and solid mixtures for internal use, and the various preparations for external use. The various remedies are considered in groups according to their physiological and therapeutic action. Under Organotherapy is an account of the action and uses of spermini hydrochloras, thyroid extract, and nuclein as well as bone marrow, brain, pancreas, and other extracts. While some of these are powerful remedies, others are of doubtful effect, but the field is one in which therapeutics may achieve victories and where much is yet to be done. The suggestion to use nuclein, which increases the leucocytes within a few hours in typhoid fever, when leucytoses is defective, is a reasonable one. In the second division the word "specific" is made to do duty for that indefinite one, "alterative," which is an improvement, but is still defined as a remedy which acts in some unknown way, acting on the disease itself rather than on symptoms, and only give curative effects when they remove the cause of the disease. If they produce their characteristic poisonous action on the system, it is an indication that they they are contra-indicated, or have been given for too long a time. Mercury, arsenic and iodine are types. At the conclusion of the consideration of remedies, a very complete and useful chapter is given on prescriptions and the method of writing them, so that their effect will be *curare cito tuto et jucunde*, is minutely pointed out. A list of incompatibilities is given; how to estimate the amounts in a prescription, metric equivalents, number of drops in a fluid dram of various remedies. The portion on the language and grammatical construction of prescriptions is worth close study, and we agree with the author that, no matter how able a diagnostician, pathologist, or bacteriologist the young graduate may be, if some of his first prescriptions be illegible, poor Latin, or a hopelessly incompatible mixture, the druggist will measure him accordingly, and his judgment may not rest with him, but go forth and prove a drawback to his success, difficult to overcome.

We consider this a reliable and complete text-book for the student and a most useful addition to the library shelf of the practising physician, as the articles are terse and comprehensive, and but a few moments are required to brush up on any remedy and its uses, and be informed of the most recent estimate of qualified authorities as to its value in therapeutics.

A Manual of Otology. By Garham Bacon, A. B., M. D., Professor of Otology in Cornell University Medical College, New York; Aural Surgeon, New York Eye and Ear Infirmary; with an introductory chapter by Clarence John Blake, M.D., Professor of Otology in Harvard University; with 110 illustrations and a colored plate. Lea Brothers & Co., New York and Philadelphia, 1898.

This is an epitomized edition of diseases of the ear, adapted to the use of students and the general practitioner. It is designed as a practical guide in the study of the affections and their appropriate treatment most commonly met with.

In the introduction Dr. Blake points out the limitations which exist in teaching otology in a practical manner to other than small classes, owing to the difficulty in demonstrating diseases of the deeper portions of the ear. The short courses taken in post-graduate clinics usually only give a superficial knowledge, and not all realize that it is only after long and earnest study that proficiency is gained.

He urges the mastery by reading and study of sections made by the student of the intricate structures in the temporal bone, as well as a thorough knowledge of acoustics, and, lastly, he impresses the importance of accurate and repeated observation. In the opening chapters the anatomy and physiology of the ear and the methods of examination are described. Besides diseases of auricle, external auditory canal, drumhead and middle ear, adenoid growths, enlarged tonsils, and diseases of the nasal passages are considered and their treatment described. Diseases of the mastoid process is given special attention, as it deserves. The indications for operation are given, and a minute description of the technique of the operation. Then follows an interesting chapter on the intracranial complications, such as brain abscess, thrombosis of the sigmoid and other sinuses, and leptomeningitis. The last chapters consider diseases of the sound-perceiving apparatus and deaf mutism. The book is well illustrated and thoroughly practical in its treatment of the various affections, and will prove a convenient reference work for those who wish to become familiar with the most modern methods employed in caring for diseases of the ear.

A Text-Book upon the Pathogenic Bacteria—For students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Medico-Chirurgical Hospital, and to the Rush Hospital for Consumption and Allied Diseases. With 134 illustrations. Second Edition, revised and enlarged. W. B. Saunders, 925 Walnut st., Philadelphia, 1898. J. A. Carveth & Co., Canadian agents, Toronto, Ont.

In this edition all the most recent work in Bacteriology has been incorporated. New chapters have been added on Whooping Cough, Mumps, Yellow Fever, Hog Cholera, Swine Plague, descriptions of the Bacillus, Ærogenes Capsulatus and the Proteus Vulgaris, and the method of determining the value of antiseptics and germicides, and of determining the thermal death point.

The book describes only the Pathogenic Bacteria, but it is an exhaustive *résumé* of all pertaining to them. In the introduction a brief history is given of discoveries in bacteriology, from those of Leeuwenhoek in 1675 to that of Yersin and Kitasato, who in 1894 independently isolated the bacillus of bubonic plague. The first two chapters consider Bacteria and their biology; their character, varieties, and classification are given; conditions influencing their growth, results of vital activity in bacteria, in fermentation and the production of disease, etc., are fully discussed. The article on immunity and susceptibility is one of great interest, describing natural and acquired immunity and the various theories as to its occurrence. The next chapters on the method of observing bacteria sterilization and disinfection, the cultivation of bacteria, are complete and full in the description of technique, and freely illustrated with cuts showing the different kinds of apparatus employed and their application in the study of these micro-organisms.

The various infectious diseases in which bacteria have been found and proved to be the cause are then taken up, and the micro-organism described; photograms of each kind are given and the method of cultivating and examining it. It is interesting to note the gradually lessening number of infectious diseases in which we are not able to isolate the cause. Last year, Koplik and Czaplewski and Hensel found a bacterium which they consider the cause of whooping cough and sanarellia bacillus constant in yellow fever. In 1892, measles and influenza, and in 1894, bubonic plague have had their specific cause isolated. Dr. McFarland has given us in this edition an exceedingly interesting up-to-date book, which should be read by every practitioner who desires to keep abreast of our knowledge of these widespread causes of disease, and it is a thorough working guide for those engaged in laboratory investigation.

Manual of Chemistry:—A Guide to Lectures and Laboratory work for beginners in Chemistry. A Text-book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph. D., M. D., Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore; Professor of Chemistry in the Maryland College of Pharmacy. New (Sixth) edition. In one 8vo. volume of 532 pages, with 46 engravings and 8 colored plates illustrating 64 of the most important chemical tests. Price, Cloth, $3.00 *net*. Lea Brothers & Co., Publishers, Phildelphia and New York.

In this work it has been the aim to incorporate in one volume all the chemistry necessary for a student of Medicine, Pharmacy, or Dentistry. Many facts pertaining to the subject and of direct interest to the physician, pharmacist, and dentist have been given special notice, while many of restricted interest have been treated very shortly or altogether excluded.

The book is divided into seven parts. The first part treats briefly of the fundamental properties of matter—Extension, Divisibility, Gravitation, and Porosity.

The second part discusses the various chemical laws and hypotheses, and devotes a chapter to general remarks regarding the elements.

The third and fourth parts take up the metallic and non-metallic elements and their compounds, and avoiding those whose study is of absolutely of no interest to medical men. All chemicals mentioned in the last revision of the United States Pharmacopeia are treated of, and those of great interest are considered very fully. The fifth part is devoted to analytical chemistry, being intended for a guide in laboratory work, including among others chapters on methods for the detection of acids, methods for quantitative determinations, detection of impurities in official inorganic chemical preparations.

The sixth part gives a very interesting and concise treatment of the subject of organic chemistry.

The seventh part was prepared principally for the use of medical students, and considers in particular physiological chemistry. The most modern methods for chemical examination in clinical diagnosis are detailed.

In all weights and measures the author has strictly adhered to the decimal system.

In the physiological part a very interesting chapter is given on milk, and a very thorough one on urine.

Altogether the aim of the author has been well attained, and it is difficult to conceive of a more interesting and useful work on chemistry for student or practitioner.

An American Text-Book of Gynæcology, Medical and Surgical, for Practitioners and Students. By Henry T. Byford, M.D.; J. W. Baldy, M.D.; Edwin B. Cragin, M.D.; J. H. Etheridge, M.D.; William Goodell, M.D., Howard A. Kelly, M. D.; Florian Krug, M. D.; E. E. Montgomery, M. D.; William R. Pryor, M. D.; George M. Tuttle, M.D. Edited by J. M. Baldy, M.D. Second edition revised with 341 illustrations in the text, and 38 colored and half-tone plates. J. A. Carveth & Co., Toronto, Ont. For sale by subscription at $7.00 cloth; $8.00 sheep or half morocco.

The first edition of this standard text-book appeared four years ago, when it met with a very favorable reception. That edition having been exhausted, the publishers, Messrs. Saunders, of Philadelphia, wisely decided to bring out a second edition, and as great strides have been made in this department of medicine, even in that short time, many changes have been necessitated both in the illustrations and the text, no less than forty of the former having been replaced by new ones. The chapters on the urethra, bladder and ureters have been rewritten, and those on plastic operations have been entirely altered. The chapter on vaginal and abdominal hysterectomy has been greatly improved and more fully illustrated. We have carefully gone over this book, and, as we might expect from the pens of such writers as the above, we have found it

thoroughly up to date, and even if we were inclined to be captious, it would be difficult to find anything to criticize. On the contrary, every page contains something that we would like to emphasize. For instance, on page 461 it says: "Every woman suffering with the lesions of a pelvic inflammation is liable from time to time to have the inflammation recur. Frequently the inflammation never leaves the part, but remains as a low grade chronic disease, ready to relight into an acute exacerbation on the slightest pretext. In other women it subsides entirely and the parts become quite free from pain. In such a case there is less likelihood of recurring acute attacks, but yet they do occur. A woman carrying diseased tubes and ovaries, due to pelvic inflammation, may be confined to her bed as often as three or four times a year for from two to eight weeks at each attack."

Again, on page 516, the author says: "The changes which take place in a woman following the removal of both uterine appendages are the same as follows the natural change of life, none other, none less. The woman is sterile; she was usually sterile at the time of the operation, and would never have been anything else. Often the sexual appetite is increased; rarely diminished, as is commonly supposed. The increase is simply the return of the woman's natural condition. Her pain and suffering and ill-health had prohibited the sexual appetite; their being removed, the appetite returns in full force. This is entirely in accord with the experience of all our cases.

"Another point well taken is that we should not lead these cases to expect too much. It is better to tell them that they will eventually have tolerable health, but not even that in much less than a year."

At times, he says, they are so badly wrecked that recovery is a matter of years.

After describing a neglected case of pelvic peritonitis, due to pus tubes, he says: "These cases invariably die if left alone, and each one cured is a life snatched from the grave; the sooner the general profession becomes thoroughly imbued with the vast importance of the whole subject of pelvic inflammation, and act intelligently upon the principles here laid down, the sooner will we have to face a lesser number of such terrible examples of neglect and ignorance."

The article on ectopio gestation is also well written and well illustrated. We would have liked to see Kollisher's or Nitze's cystoscope mentioned in the chapter on examination of the bladder, and catheterizing the ureters, as with these instruments it is so much easier to perform this otherwise difficult manipulation. On the whole, we have only words of praise for this excellent work, and congratulate all concerned in its production—Editor, contributors and publishers—on the success of their great undertaking.

PUBLISHERS DEPARTMENT.

ACUTE INFLAMMATION OF THE PROSTATE GLAND.

The Journal of the American Medical Association for August 20th contains a report on inflammation of the prostate gland, which was presented to The Section on Surgery and Anatomy at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898, by Liston Homer Montgomery, M.D., of Chicago, Ills. His plan of treatment in acute inflammation of the prostate gland is to wash out the abscess cavity with hydrogen peroxid, give copious hot water enema and hot hip baths frequently, avoid morphine internally and advise care lest the patient strain at stool or during micturition. On the theory that toxins are retained in the circulation and within the gland, and to prevent degeneration in the gland substance, he administers triticum repens or fluid extract tritipalm freely, combined with gum arabic or flaxseed infusion. Along with these remedies the mineral waters, particularly vichy with citrate of potash, go well together. Hydrate of chloral or this salt combined with antikamnia are the very best anodyne remedies to control pain and spasms of the neck of the bladder. These pharmacologic or medicinal remedies are the most logical to use in his judgment, while externally, applications of an inunction of 10 or 20 per cent iodoform, lanoline, as well as of mercury, are also of value.

SANMETTO IN URETHRITIS, CYSTITIS, PROSTATIC ENLARGEMENT AND ENURESIS.

I gladly write my opinion of Sanmetto. For two years it has given results which are perfectly satisfactory. Have had equal success with it in urethritis, cystitis and prostatic enlargement, and phenomenal success when using it for incontinence of urine, both in children and old people. If in medicines we have specifics, then Sanmetto I regard as one in enuresis.

C. M. HARRIS, M.D.

BOURBON, IND.

MAGAZINE NOTES.

Many readers of Mrs. Humphrey Ward's latest story "Helbeck of Bannisdale" must have wondered what opinion an intelligent Catholic reader would be likely to have of it as a portraiture of English Catholics. The question is answered very interestingly in a caustic review of the story by an English Jesuit, which *The Living Age* for October 15 reprints from The Ninteenth Century.

The Living Age for October 22 translates from the leading Italian review, *Nuova Antologia*, a striking article on the Present Condition of Italy, which gives a vivid but despondent presentation of the social and political problems with which Italy is at this moment confronted.

M. Réné Doumic's "Modernity" which *The Living Age* for October 29 translates from the *Revue des Deux Mondes*, is a clever essay, in which a shaft is aimed at modern impressionists.

Americans will gain a new estimate of the progress which the United States is making in the appreciation and the cultivation of art from reading Mr. William Sharp's description of *The Art Treasures of America*, reprinted from The Nineteenth Century in *The Living Age* for October 29.

CANADA
MEDICAL RECORD

NOVEMBER, 1898.

Original Communications.

A CASE OF SUPPURATIVE PYLEPHLEBITIS WITH NO APPARENT CAUSE.

By S. H. MARTIN, M.D., C.M., Waterloo, Que.

C. M., male, aged 40, French-Canadian, married, temperate. Was born and had always lived in the Province of Quebec. Never had any illness, except diseases of childhood. Worked as quarryman in marble quarry. Came to me on Sept. 20, 1898, with following history and symptoms: Was suffering from cough, pain in right side in the infra-scapular region and neuralgia of fifth nerve, following severe cold contracted one month previous while working in a marble quarry.

Examination of the lungs revealed nothing abnormal; temperature was normal; had an eruption on the right side of face and neck corresponding to course of the nerves and characteristic of herpes zoster. Came to the office again on Sept. 25: neuralgia and eruption on face and neck were better, cough the same, and still had the pain in infra-scapular region of right side, also some gastric disturbance present vomiting, coated tongue, etc., and spoke about having "spells of being very cold" (which I afterwards learned were distinct chills). I saw him again on Sept. 30, temperature was 101°, respiration rapid; was suffering from headache and severe vomiting, and abdomen was very tympanitic. I ordered him to bed, after which I saw him twice daily. From Oct. 1 to Oct. 5 his condition remained unchanged, had all the symptoms of septic trouble, chill

once daily about noon, hyperpyrexia in the evening and subnormal temperature in the morning. About Oct. 5 pain in the infra-scapular region became very agonizing, and extending downwards and forwards into the hepatic region, was worse on inspiration, cough more persistent, respiration more rapid, etc ; in fact, at this stage the case presented all the symptoms of lung involvement. On examination I found dullness over right lung as high as the fifth rib in mammary and axillary regions, and to the ninth rib in the infra-scapular region. On consultation crepitation was found present with both inspiration and expiration. The area of liver dullness was uncertain owing to the marked tympanitis, but about 5½ inches vertically. On Oct. 8 I asked Drs. J. D. Pagé and J. A. Corcoran, of Waterloo, to see the case, and we came to the conclusion that there was some pyæmic trouble probably involving the liver. His condition remained unchanged until Oct. 11, when I asked Dr. Geo. Fisk, of Montreal, to see the man. We introduced an aspirating needle in the seventh interspace at the posterior axillary line and got pus. In consideration of the fact that we obtained pus at so high a point we decided to make an exploratory incision with the possibility of revealing an old empyæmia. Accordingly (Dr. Fisk having kindly consented to operate) the patient was anæsthetized and resection of the eighth rib at the posterior axillary border made in the usual manner. On opening the pleural cavity no pus was revealed, but the lower lobe of lung was found pushed up and compressed, its usual position being occupied by the diaphragm and some firm bulging mass below it, apparently the liver. It was decided to extend the incision through the diaphragm and evacuate the pus. The two layers of pleuræ were sutured together with catgut, the diaphragm opened and the same method followed with the two layers of peritoneum. An incision was made into the liver and from 20 to 30 ozs. of brownish pus with a strong fæcal odor was evacuated. A drainage tube was inserted and incision dressed in usual manner. The patient reacted well, and for two days showed some amelioration of symptoms, particularly absence of cough, less fever and no chills.

On the third day after operation patient developed complete ptosis of right eyelid. The following day he became delirious, and died on the 17th, six days after the operation. Assisted by Dr. J. A. Corcoran I made a partial *post-mortem* examination, examining only the contents of abdominal and thoracic cavities (permission to do a more extensive one being refused). The stomach and intestines were found to be in a healthy condition, no ulceration of any kind, no evidence of typhoid fever; appendix normal, and rectum showed no signs of hemorrhoids; spleen and kidneys normal, but right kidney was found lying well in towards the median line, its usual position being occupied by the lower portion of the right lobe of the liver. Heart and lungs were healthy, and showed no evidence of any septic trouble. The liver was found increased to an enormous size, the right lobe particularly, which occupied nearly all the right hypochondrial and right lumbar regions. On section it presented numerous foci of pus, ranging in size from a pea to a hen's egg, the largest one having been opened in the operation.

These foci of pus were distinctly seen to be connected with the portal veins, showing the case to have been one of suppurative pylephlebitis with no apparent origin of infection.

A CASE OF INCONTINENCE OF URINE CURED BY ANTERIOR AND POSTERIOR COLPORRHAPHY.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., ENG.,

Fellow of the American Gynecological Society; Professor of Clinical Gynecology, Bishop's University; Surgeon-in-Chief of the Samaritan Hospital for Women; Gynecologist to the Montreal Dispensary; Surgeon to the Western Hospital, Montreal.

During the last twenty-four years I have been consulted by about the same number of women for incontinence of urine following a very severe labor. A few of these were found on close examination to have a vesico-uterine, or a vesico-vaginal fistula, which were dealt with in the usual way, and cured by operation. Nearly all the others were treated for two or three months with a mixture of iron, strychnine and phosphoric acid, in full doses, and were also cured. The cause in

their cases being weakness of bruised and overstretched muscular fibre. But about six months ago the present case came under my care at the Montreal Dispensary, and proved an exception to the rule of my experience. Mrs. M., age 40, had a very severe instrumental labor about a year ago, ever since which time she has had to wear large pads to catch her urine. Her physician was unable to stop it in any way. If she remained in bed she could hold her water for an hour or two, and then it would trickle out if she moved or took a long breath, and when she went about her work it kept running all the time, keeping her clothes wet and always smelling of urine. I put her on the above tonic treatment, and, in order to observe her better, took her into the Samaritan Hospital for a couple of weeks. A careful examination failed to detect any fistula; in fact, in filling her bladder with warm salt solution, the latter flowed out beside the catheter; there seemed to be no life in the sphincter. There was a large rectocele and cystocele, and lacerated perineum. Although I have seen a great many patients with this condition, and quite commonly, causing desire to micturate frequently, and also a sensation as though some urine still remained in the bladder, as indeed it does, yet I do not remember to have had a case in which it caused incontinence. I therefore feared that the cure of these conditions alone might not suffice to cure her of her trouble, and I had some intention of, at the same time, shortening or taking a reef, so to speak, in the relaxed sphincter at the same time. This, I found it was quite easy to do, when I had removed the vaginal mucous membrane to the extent of two and a half inches in length and an inch and a half in breadth.

In order to tighten up the sphincter, I made the denudation further down towards the meatus than usual, and instead of drawing together the edges surrounding the denuded area with a purse string suture, as I usually do, I tightened up the sphincter by means of a running catgut suture, which was buried in the muscular tissue, and the mucous membrane of the vagina was then accurately brought together over this. Hegar's operation on the posterior vaginal wall was then done, with a buried and a super-

ficial row of catgut. This made a good support for the bladder. Fortunately, the catgut was good and her tissues healthy, so that in both operations primary union was obtained. The result was all that could be desired. She could cough and turn in bed from the first day without wetting herself, and at the end of two weeks she could walk about with comfort and without a single drop of urine passing involuntarily.

250 Bishop Street, Montreal.

Selected Article.

THE TREATMENT OF TUBERCULOSIS BY COMPULSORY HYGIENE.

By E. CLIFFORD BEALE, M.B. Cantab., F.R.C.P.

Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, etc.

The great crusade that is slowly gaining ground in England, as well as in other countries, against the tubercle bacillus and its product is, like many other crusades, liable to be led off the direct path by side issues. Tubercle will never be eradicated by fresh air or by sunshine, by climate or by sanatorium, unless each and all of these means are used discriminately, with due regard to the individual requirements of each patient. Hence, the use of such an expression as "open-air treatment" is apt to mislead, and to give rise to the idea, now very prevalent, that prolonged residence in the open air will cure the disease. Such an idea is attended with some amount of danger, as is shown by the fact that consumptive people are already beginning to put the "treatment" in practice, and are finding out to their cost that something more than open-air is needful for success.

Tuberculosis, like syphilis, may well be described by the definition so happily devised by the late Dr. Moxon as "a fever diluted by time." Due, in the first instance, to an infective organism, and maintained by the further development of that organism within the human body, the disease presents much the same phenomena spread over months and years as are brought about in the course of a much shorter period, and in a much less diluted form, by the specific micro-organisms of the recognised infective fevers. In both the chronic and the acute fevers we assume that the essential feature of the morbid process is a constant warfare between the tendency of the foreign organism to increase and multiply in the tissues of the host, disturbing both their structuré and their function,

and the tendency on the other hand of those tissues to resist such disturbance, and to return to their normal type.

In the case of the acute fever, the lines of treatment have been long since laid down and accepted by all intelligent people. The patient must surrender himself absolutely into the hands of his medical adviser, and trust implicitly to him to guide the disturbed natural processes in the best possible way, so that they may resist the attack of the foreign organism and overcome the consequences to which it gives rise.

In such fevers the very acuteness of the disease is a safeguard against any ignorant attempts at self-treatment on the part of the patient. He feels his helplessness, and seeks aid. The sufferer from tuberculosis, unless, indeed, the disease begins in its most virulent form, rarely experiences this feeling of helplessness, and hence, in the great majority of cases, he does not seek aid until the poison is so far developed within him as to give rise to definite symptoms ; and, even when these have declared themselves, he will rarely submit himself entirely to medical control. He feels that his brain is still clear, and he will take advice only in so far as it does not interfere too much with his sense of freedom.

Herein lies the explanation of much of the failure of rational medical treatment in the past. From the earliest times to the present the main principles which should guide the treatment of consumption have been clearly recognised and put forward, in countless forms, and in all the languages of the civilized world ; but, until the present era, no serious effort has ever been made to put them in practice under the only conditions in which they can be expected to succeed, viz., under strict medical supervision. That the accepted methods are actually effective when properly applied is shown beyond the possibility of doubt by the results obtained in chest hospitals, where patients with incipient disease and fever are kept at rest till the fever has subsided, and are then required to lead a hygienic life for a few weeks. By these simple means their natural processes are restored to healthy action, and for the time they are cured ; but when they have arrived at this stage, they are sent out into the world again, to live their own lives, and sooner or later the disease once more gets the upper hand.

Amongst the well-to-do classes the success of treatment is less in proportion to the numbers treated, for the want of that very supervision which the poorer patient gets in the hospital wards. The rich man obtains the best advice, and may even provide himself with a constant medical attendant, but still he submits as a rule only to such restrictive treatment as he himself believes in. From the earliest times to the present the virtues of climatic treatment have been held in high esteem, but the exalted estimate thus formed has been one of the potent factors in preventing success. A climate alone cannot cure consumption, nor can it even produce lasting benefit, unless it be used with intelligence, guided by expert advice. A writer of a century ago, while advocating a change of climate to his consumptive patients, added a proviso, that the patients should not expect the change to produce its full effect in less than two years, and he further advised that " a medical atten-

dant should accompany the patient if possible to prevent his losing time in the pursuit of all sorts of remedies which will be recommended to him." If this advice was valuable 100 years ago, it is of tenfold greater value now, when so much more is said of climatic treatment, and when the temptation to try new remedies is rendered every day more difficult to resist.

But in spite of the multiplication of health resorts for consumptives, and the ever-increasing number of specific remedies, the facts remain that under the old methods of treatment, where the patient is left to carry out the advice given to him without direct supervision, the relative amount of success shows but little improvement. It is only of late years, since the method introduced by Dr. Brehmer at Gœrbersdorf has been thoroughly understood and appreciated, that any real advance has been made. His method consists essentially in nothing more than skilled supervision, under which the patient is forced to surrender his liberty into the hands of his medical adviser, who, in his turn, does but little more than force the patient to live the kind of life, eat the kind of food, and breathe the kind of air, that is best suited to his particular condition. The patient is placed as much in the hands of his doctor as if he were prostrated by a fever of an acuter kind, nor is he permitted to consider himself convalescent until such time as his doctor may determine, although he may have felt himself restored to health at a much earlier period.

Under such supervision it is being proved by the experience of successive years that tubercular disease of the lung may be arrested, and the patient rendered capable of resisting further invasion of the disease; but the proof has thus far been left almost entirely in the hands of Continental physicians.

It is not, however, sufficiently recognised, either by patients or their medical advisers, that this arrest and this power of acquiring resistance can only be achieved by *prolonged* hygienic treatment of the earliest stages. It is not reasonable to expect that a patient who has apparently recovered from the effects of a "weak lung" will be prepared to submit himself to strict hygienic treatment for the next year or eighteen months, unless the necessity for so doing is very strongly explained to him by his medical adviser. Nevertheless, it is the duty of every such adviser to tell his patient fairly and fully that the sacrifice of a year or more at that stage of his illness will probably be the means of adding several years to his life, and also to make no secret of the fact that with each relapse of the disease the chances of ultimate recovery must be less. The cases of young men who have refused to take such advice, and have for the sake of a little present advantage made themselves permanent invalids in the course of a year or two, are only too well known to all who have had much to do with consumptive life. It requires some determination to throw up employment which promises future success, and to enter into a more or less restricted life for a couple of years; but the doctor knows, even if he cannot make the patient realize, that unless such a course is adopted the patient's life may have come to an end within the three years, whereas if those years were properly utilized, he might at the end of them be able to take

his place in the world again with a reasonable expectation of life. This fact cannot be too widely or too fully recognised, that it is in the preliminary stage only that permanent success can be looked for. Post-mortem evidence is constantly proving the fact that a *small* tubercular lesion is capable of healing up and forming a scar; but it is only the small lesions that recover. Where larger lesions are discovered, it generally happens that the patient has died of tubercular disease. An incipient lesion is curable, but where larger ones are present "cure" is rarely obtained. Quiescence of the tubercular process may be induced, but this quiescence is only temporary.

In the cases, then, of confirmed or advanced disease, the strict enforcement of a hygienic life is of less importance, because, although temporary improvement is obtained, the chance of complete arrest of the disease is but small, and the temporary recovery may be obtained by less irksome means. To the incipient consumptive, on the other hand, the hope may always be held out, in the first instance, that there is a possibility of complete arrest of the disease, which is worth the sacrifice for a time of personal comfort, and even of personal liberty. A few months of such treatment will suffice to show whether ultimate recovery may be looked for; but if, from the virulence of the poison, or the small resisting-power of the patient, the disease progresses, it is best to let the patient recognise the inevitable, and to make his remaining days as comfortable to him as possible.

Assuming, however, that recovery is not only possible, but probable, it remains to be considered whether special climatic conditions are essential to success. Much has been written and spoken on this question, and from the mass of opinion hitherto expressed, we may select these few points, upon which most experts are agreed. The air which the patient breathes must be as free as possible from organic and inorganic particles. If such freedom can be obtained, it does not appear to be of much importance whether it be at a greater or lesser elevation above sea-level. The deleterious effects of an atmosphere charged with organic particles has been clearly proved by Dr. Ransome in his Weber-Parkes' prize essay. The danger of contamination by inorganic particles is only great where such particles can act as carriers of organic matters. Dr. Cornet's oft-quoted observations all went to prove that the dust to which he traced so much evil was not in itself the cause of disease, but that each particle of dust might be the vehicle for infective material. The dust of a town is therefore more dangerous to the consumptive than the dust of the open country, provided that there be no consumption among the inhabitants of the district.

The ancient idea that the exhalation of pine-trees is "good for consumption" does not rest upon any trustworthy basis. If it could be shown that infective organisms are destroyed by such exhalations, then it would be fair to regard the forest air as purer than that of the surrounding country; but such an explanation has not yet been demonstrated.

One other atmospheric condition would seem by Dr. Ransome's recently-published observation to be essential in preventing the

development of this bacillus tuberculosis outside the body. That condition is full and complete ventilation, and the avoidance of stagnant air. In fullfilment of this requirement, the elevation above sea-level is naturally of importance, but it need not be more than a moderate elevation to ensure freedom from atmospheric stagnation. The breezes that ventilate the sea-side cliffs and island commons are quite as efficient for that purpose as are the colder draughts that sweep along the hillsides and valleys of the higher-lying mountainous districts.

But apart from natural ventilation, which must always be an uncertain factor in securing interchange of air, modern science has provided a means of ensuring thorough ventilation in closed spaces, which has been sufficiently long under observation to have proved its claim to recognition. The system of forcing filtered, warmed or chilled air into hospital wards or living rooms has been found to work with ease and completeness at the new Birmingham General Hospital and at Glasgow, where it was first used on a large scale. By its means the air in any given room can be kept constantly renewed, the continuous inpouring of fresh air giving rise to an equally steady outgoing of air, contaminated or otherwise, through the outlets provided. A simpler method of keeping the air in movement in rooms which are supplied with air by means of open windows, etc., can be adopted wherever the electric current is supplied by the use of fans worked by a small motor, which force a definite amount of fresh air into the room, and are capable of regulation according to the time of year and the amount of wind.

But pure air and good ventilation will not cure consumption. They must be used in an intelligent manner, and their use must be kept within reasonable bounds. Experience in London goes to prove that, while the disease is relatively more frequent amongst those engaged in indoor occupations, still there is a very large proportion distributed amongst outdoor workers. These are, however, of the poorer class—day labourers, porters, and jobbing workmen, who live a somewhat hand-to-mouth existence, and are rarely in a position to guard themselves properly against the common risks of chill, etc., during changeable weather. Amongst outdoor workers of a higher class consumption is by no means frequent.

It has been asserted that the damp and changeable climate of England cannot be suitable to the consumptive patient, but it must be borne in mind that the assertion rests on theory, and not on fact. No serious effort has until lately been made to place consumptives under strict hygienic discipline in this country. Only those who have actually experienced the fact can understand that a consumptive patient may lie out in the open air for six hours on a cold, foggy day in winter without taking cold, so long as he is protected by warm clothing and sheltered from wind. The fear of "taking cold" always oppresses the mind of the average patient, and amongst those who are least educated the fear leads to an inordinate use of clothing and a dread of open windows, and thus the patient is deprived of one of the essential factors for his recovery, viz., constant interchange of air. Well-rooted theories and opinions are very tenacious of life, and it is to be expected that a long time will elapse before modern knowledge prevails over ancient prejudice

but for this very reason it is essential that effort should be made to utilize the resources which we undoubtedly possess in the British Isles for employing fresh and pure air as a curative agent, and gradually to educate public opinion to accept the proposition that it is not necessary to go to foreign countries for sanatorium treatment, and that such treatment does not depend entirely for its success on any special climatic conditions.

Banishment from home comforts and surroundings, however desirable in the treatment of neurotic conditions, is by no means necessary in dealing with consumption. At the same time, it is not desirable that the consumptive patient undergoing sanatorium treatment should see too much of his intimate friends and relatives. Where success largely depends upon the strict maintenance of discipline, it is by no means wise to permit outside criticism. A well-meaning but injudicious friend might easily be the means of discouraging the patient, and causing him to falter in his determination to carry out the rules laid down by his medical adviser, especially if, as is not uncommonly the case, he finds such rules irksome to him at first.

Another point which makes for the selection of home treatment in preference to foreign residence is the question of the food and its preparation. The distinction between the home and foreign cuisine is not so great now as was formerly the case, but there is still sufficient difference to make it a matter of importance that the consumptive patient should have his food prepared in a way which he has learned to believe in. In many Continental sanatoria, and especially at Nordrach, the taking of a definite amount of food in each day is insisted on, and success is obtained even in spite of the fact that the German cuisine and methods of serving food are altogether distasteful to many English patients. It may reasonably be assumed that equal success would follow the compulsory clearance of more familiar dishes served in daintier manner.

In the management of a sanatorium for consumptives, an immense amount of responsibility rests upon the medical officer. He has to study each case with more than ordinary accuracy, and must bring to bear all his powers of persuasion and firmness to induce the patient to carry out the details of living that are prescribed for him. Hence, it is not desirable that any medical officer should attempt the control of many patients at the same time. Ten such cases, closely observed and regulated, should be enough for each officer. Consulting aid should always be available where longer experience and greater weight of authority are called for. The insistance upon compliance with all rules so long as the patient submits himself to treatment must be absolute. Where success depends upon discipline, there must be no relaxation in favour of individuals. The patient must carry out the prescribed treatment, or be discharged from treatment altogether. This rule is no doubt easier to enforce in countries where military obedience is a part of the national education, but the common-sense of the Englishman will make him equally amenable, if only he is convinced of the value of the treatment to which he subjects himself. To educate him as to the necessity for discipline is the first step. When that is accomplished, compulsory hygiene will overcome tuberculosis.—*Treatment.*

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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SOME OBSERVATIONS ON BRAIN ANATOMY AND BRAIN TUMORS—ABSTRACT.

Dr. William C. Krauss, of Buffalo, read a paper at the Ninety-Second Annual Meeting of the Medical Society of the State of New York, Albany, January 25, 1898, with the above title.

Recalled attention (1) to the difficulty in remembering the gross anatomy of the brain, and (2) to the almost universal presence of optic neuritis in cases of brain tumor.

He attempted to overcome the difficulty in regard to the anatomy of the brain by formulating the following rules, which are somewhat unique and original, and, at the same time, easily remembered.

RULE OF TWO.—1. The nerve centers are divided into two great divisions: (1) encephalon; (2) myelon. 2. The encephalon is divided into two subdivisions: (1) cerebrum; (2) cerebellum. 3. The cerebrum, cerebellum and myelon are divided into two hemispheres each: (1) right; (2) left. 4. The encephalon is indented by two great fissures: (1) longitudinal; (2) transverse. 5. Into these two great fissures there dip two folds of the dura: (1) falx cerebri; (2) tentorium cerebelli. 6. There are two varieties of brain matter: (1) white; (2) gray.

RULE OF THREE.—1. There are three layers of membranes surrounding the brain: (1) dura; (2) arachnoid; (3) pia. 2. Each hemisphere is indented by three major fissures: (1) sylvian; (2) rolandic or central; (3) parieto-occipital. 3. Three lobes, frontal, temporal and occipital on their convex surface are divided into three convolutions each: superior, middle and inferior, or 1st, 2nd and 3rd. 4. There are three pairs of basal ganglia: (1) striata; (2)

thalami; (3) quadrigemina. 5. The hemispheres of the brain are connected hy three commissures: (1) anterior; (2) medi; (3) post-commissure. 6. The cerebellum consists of three portions: (1) right; (2) left hemisphere; (3) vermes. 7. There are three pairs of cerebellar peduncles: (1) superior; (2) middle; (3) inferior. 8. The number of pairs of cranial nerves, in the classifications of Willis and Sommering, can be determined by adding 3 to the number of letters in each name, that of Willis making 9 and that of Sommering making 12 (or the name containing the more letters has the largest number of pairs of nerves, and *vice versa*). 9. The cortex of the cerebellum is divided into three layers of cells (1) granular; (2) Purkinje's cells; (3) a molecular layer.

RULE OF FIVE.—1. Each hemisphere is divided externally into five lobes, of which four are visible: (1) frontal; (2) parietal; (3) temporal; (4) occipital, and one invisible; (5) insula (isle of Reil). Roughly speaking, the visible lobes correspond to the bones of the cranium; that is, the frontal lobe is underneath the frontal bone, the parietal lobe beneath the parietal bone, etc. 2. The brain contains five ventricles, of which four are visible—the right and left, or 1st and 2nd, the 3rd and the 4th; and one invisible, the 5th or pseudo-ventricle. 3. The cortex of the brain contains five distinct layers of ganglion cells.

Studying carefully 100 cases of brain tumor in which an ophthalmoscopic examination had been made for the presence or absence of choked disc (optic neuritis), Dr. Krauss announced the following conclusions:

1. Optic neuritis is present in about 90 per cent. of all cases of brain tumor.

2. It is more often present in cerebral than in cerebellar cases.

3. The location of the tumor exerts little influence over the appearance of the papillitis.

4. The size and nature of the tumor exerts but little influence over the production of the papillitis.

5. Tumors of slow growth are less inclined to be accompanied with optic neuritis than those of rapid growth.

6. It is probable that unilateral choked disc is indicative of disease in the hemisphere corresponding to the eye involved.

7. It is doubtful whether increased intracranial pressure is solely and alone responsible for the production of an optic neuritis in cases of brain tumor.—*The Philadelphia Medical Journal.*

USE OF A NEW ALBUMEN PREPARATION.

STRAUSS.—On the use of a new albumen preparation, "Tropon," in the nourishment of the sick (*Therap. Monatsh.* 1838, p. 241.) This new preparation is practically a pure, albumen, analysis showing from 83-97.2 albumen. The aqueous extract yields no biuret on Trommer's test, therefore no soluble albumen or carbohydrates. It is a fine, greyish brown, meally-like powder, which is insoluble in water and is without odor. It digests well in artificial gastric juice. In conditions where large pieces of food would irritate or be impossible, as in œsophageal stenosis, or gastric secretory insufficiency, or typhoid fever, and owing to its being a fine powder, tropon can be used with advantage as a concentrated nitrogenous food. One advantage over other new artificial foods, as nutrose, eucasin, etc., is its cheapness, one kg. of albumen in form of tropon costing, in Germany, four marks ($1.00). Twenty to sixty grams pro die were administered without irritative symptoms. It is best given in milk—one drachm of tropon freshly stirred up with one-half litre of milk. It can also be used with chocolate, or in the form of zwieback, and may be taken for months without opposition from the patient. Uric acid determination shows a lessened uric acid output. Therefore, as it is not a neuclein, it may be useful in gout or nephrolithiasis.—*The Journal of Treatment.*

SEVERE TYPES OF SYPHILIS AMONG MEDICAL PRACTITIONERS.

That syphilis with which practicing physicians are afflicted has often characteristics of its own seems a fact which may not be generally known and appreciated. It is a fact, nevertheless, of the utmost importance to every practicing physician and surgeon. The peculiarity by which the syphilis of physicians is characterized is its unusual severity. There are few, if any, physicians, who could not point out, among their friends, a number of colleagues who have suffered from a severe and obstinate form of syphilis, which they acquired in the performance of their duty as practicing physicians or surgeons. Some distinguished medical men who stood high in their profession have succumbed to the disease and thus died martyrs of their self-sacrificing duties.

The gravity of syphilitic manifestations depends, as in other infectious diseases, upon the soil in which the infection takes place, *i. e.*, the patient, as well as upon the virulency of the infectious agent. The intensity of manifestations may be

influenced, however, in a greater or lesser degree, by adequate treatment.

Considering the readiness with which syphilis may, as a rule, be controlled if properly treated, it would, at first sight, appear strange that the disease should present so obstinate and so grave a type as it is frequently observed in members of the medical profession. Upon a superficial investigation of this peculiar phenomenon one would be tempted to attribute the refractory character of the disease in members of the medical profession to the proverbial unconcernedness and carelessness of physicians with regard to treating their own afflictions. In some instances this fact may in reality furnish an explanation of the frequent severity of the disease among medical practitioners. But there is another much more plausible reason why physicians are particularly prone to an obstinate and severe attack of the disease. The initial lesion of syphilis, which has been acquired in the practice of medicine and surgery, is situated where it may be readily mistaken for some other affection, and thus valuable time may be lost before the true character of the disease is recognized and proper treatment instituted. If acquired in medical practice the initial lesion of syphilis appears at a finger, usually the index or middle finger of the right hand, and results from examining or operating syphilitic patients. In this situation, especially at the root of the nail, the lesion does not present the usual characteristics of the syphilitic chancre, viz., the induration of the initial lesion of syphilis. Mixed infection may aid in obscuring the true character of the disease, and it has happened that only after a long siege of sickness and the appearance of destructive necrosis the correct diagnosis has been made, where the patients, moreover, had been observed by authorities of international reputation. It has often been claimed that syphilis which results from an infected finger is of a particularly severe nature. But it is not, of course, the anatomical situation of the initial lesion, but the late diagnosis and, therefore, late treatment which is often a cause of particularly severe types of the disease. The latter fact was recently emphasized in a paper by Dr. Brandis, of Bonn. The late treatment, then, is one of the causes, and probably the main cause, of the severe types of syphilis that are sometimes acquired by practicing physicians in the performance of their daily duties. This fact, after it has once been recognized and disseminated among the members of the profession, should caution them against considering lightly any slowly healing ulcer situated upon the hand that is frequently used in examining or operating upon patients.

But the proverb that an ounce of prevention is worth a

pound of cure, if true in any instance, is more than true with regard to this particular case. The readiness with which an inoculation with the syphilitic virus may take place upon an excoriated surface, like that produced by a hang-nail, etc., is self-evident. In cases of known syphilis, therefore, or even where there is only reason for suspicion, it would almost seem unpardonable, considering the duties of the physician toward his family, as well as with regard to the consideration of his own health only, to examine or operate without protecting his hands by impermeable gloves.—*Medical Review*, June, '98.

REMARKS ON THE CLASSIFICATION OF THE ANEMIAS OF INFANCY, WITH A REPORT OF A SEVERE CASE.

By JOHN LOVETT MORSE, A. M., M. D., Boston.

The writer considered the following modification of Monti's classification of the anemias fairly satisfactory:—

SECONDARY—

Mild Anemia.
Mild Anemia with Leucocytosis
Severe Anemia with Leucocytosis.

PRIMARY—

Pernicious.
Leukemia.

The essayist regarded the case he reported as an example of severe secondary anemia with leucocytosis. The cause of the anemia was undoubtedly to be sought in the general malnutrition resulting from improper food. The case presented a splenic enlargement, but that this was not an essential feature of the case was shown by the fact that it became smaller as the case progressed, probably finally disappearing entirely.—*Pediatrics.*

THE CIGARETTE QUESTION.

Some time ago we received a brochure entitled *The Truth about Cigarettes*, consisting of papers read and discussed by the Medico-legal Society of New York. It consists of a powerful traversing of the sensational rubbish that has at times appeared upon the deadliness and immorality

of cigarette smoking, and which has been exploited *ad nauseam* by many members of the "yellow" journalism. The argument is clear, trenchant, and to our mind convincing, and is put with forcible lucidity, logical coherence, and the strictest regard to the laws of evidence.

The inquiry originated in a paper by Mr. William H. Garrison, read before the Medico-legal Society of New York in November, 1897. The principal charges brought by those who would forbid altogether the manufacture and sale of cigarettes, are that the use of them causes insanity, phosphorus, opium, arsenic, or other poisoning, the production of tumor on the brain, paralysis, suicide, beggary and death. The absolute untruth of all these statements is clearly shown by a searching investigation of the reported cases upon which they are founded.

We are glad to see that, generally speaking, the medical press takes a moderate and sensible view of the question. It is pretty well proved that tobacco does not directly produce insanity, whether smoked in cigarettes or in any other form. The *Lancet* commission of experts which examined many brands of cigarettes reported that in no case did it find any trace of opium or any unclassified alkaloid or any trace of chlorine or arsenic, though some cigarettes showed a faint trace of copper, due, no doubt, to the metallic label on the wrapper. That the excessive use of tobacco might produce paralysis may be inferred from its known physiological effects, though that result is far more likely to follow the habit of chewing than that of smoking. As to the assertion that the nicotine is volatilized and is drawn into the air vesicles, where it finds an easy entrance to the blood, and that particles of carbon are also inhaled into the air vesicles, it is probable that they do not penetrate beyond the larger bronchial tubes at all. Further, the amount of carbon that could pass into the lungs from cigarette smoking would be so small that it may be neglected as an appreciable increment on that which every dweller in a large city habitually inhales.

Process reproductions of some of the startling newspaper reports are given, and on the opposite pages are statements of the actual facts of the case as borne out on investigation. In every instance it is clearly shown that there was no connection whatever between cigarette smoking and the results attributed thereto, and in many cases it was shown that the victims did not smoke cigarettes at all.

So much for the paper. Now as to the question itself. We do not believe that it has been shown that cigarette

smoking is specially injurious to a healthy adult. Like many other things, if there is a constitutional taint it may bring it out when tobacco is used to excess, but we do not believe that it is essentially more injurious in the form of cigarettes than in any other form. Bicycling has been largely credited with inducing masturbation in girls, but, as Dr. Ballantyne has pointed out in his very able article on Bicycling and Gynæcology in the *Scottish Medical and Surgical Journal* for June, "perhaps the best summary of the matter is contained in the following statement made by Verchere (*Progrès medical* 2. S., xx, 306, 1894) at a meeting of the *Société de médecine publique et d hygiène professionelle:* "Quant aux sensations voluptueuses qui peuvent se produire, elles n'apparaissent que lorsque la femme le veut bien." In other words, where a taint exists in the psychical or physical nature, certain things, otherwise innocuous, may become exciting agents. But that is a reason only for prohibiting their use to individuals, and not for depriving the large mass of people of a legitimate enjoyment, which in the case of bicycling is also for the majority a healthful exercise. Certain forms of food are poisonous to certain people, yet that is no argument for prohibiting their general use. Even unobjectionable foods, if eaten to excess, may become sources of injury to the individual. Because some people will not refrain from eating shell-fish, knowing, as they do, that they invariably suffer from it, are oysters, crabs, clams, etc., to be prohibited by law to all people? Because some people surfeit themselves with food till they become confirmed dyspeptics, a misery to themselves and those around them, with wrecked constitution and impaired mentality, is eating to be henceforth altogether prohibited by law? We might produce instances innumerable, but these are sufficient to establish our point.

The actual facts are: Tobacco is harmful to most neurotics, though even among these we have known a few exceptions, to whom, when used in moderation, it seems decidedly beneficial; it is harmful in certain cases of cardiac affections; it affects the sight injuriously in some few people, and the throat, producing follicular pharyngitis, in others. These people should not use it. Used to excess it is bad for every one, as is everything else, even such wholesome things as bread or water. What constitutes excess is an individual question to be determined for each person either of himself or with the advice of his physician. Cigarette smoking is not of itself more harmful than any other form, but is subject to the above-mentioned general law-facts. It has, however, two special dangers: 1. The smallness of the cigarette and its

convenience may perhaps induce inordinate use; but that, as we have said, is a question for the individual, not the public. 2. The injurious habit of inhaling the smoke is more likely to take place with the mild cigarette than with the stronger pipe or cigar. That again is a question for the individual. The asserted increase of cigarette smoking among boys, if true, is an evil, for people of immature age, as well as those of impaired constitution noted above, ought not to smoke at all. But, for the reasons already mentioned, that is no argument for the prohibition of the proper use of the cigarette or any other form of tobacco by the world at large. We have had a great deal too much of this prohibitive legislation, as in a note on Undue Restrictive Legislation, in our issue for June 4th, we have already had occasion to point out, and we are decidedly opposed to any more of it.—*New York Medical Record*, July 30, 1898.

THE COLOR OF NEGRO INFANTS.

Pediatrics for July 1st states, on the authority of Dr. Farabery, that the negro baby at the time of its birth is exactly the same color as its white brother, and it shows signs of color only after an interval usually of several days, but often extending to many weeks. It further adds that an eminent French physician, who studied the subject at a Soudanese village on exhibition in Paris, recorded as the result of his observations that the negro baby comes into the world a tender pink in color; on the second day it is lilac; ten days afterward it is the color of tanned leather, and at fifteen days it is chocolate. The coloring matter in the case of the negro lies between the layers of the epidermis. This pigment is semifluid, or in the form of fine granulations; in the Indian it is red, and in the Mongolian it is yellow. It is influenced not only by sun and climate, but by certain maladies, and the negro changes in tint just as the white person does.

To these observations we may add two other facts—namely, that the least tinge of colored blood, however fair the person otherwise be, shows itself in more or less lividity of the lunula of the nail, and that the scrotum of the male negro is always very dark, though he be in other respects exceptionally fair.—*N. Y. Medical Journal.*

KNEE-JERKS IN DIABETES MELLITUS.

The *Lancet*, July 17, 1897, gives the following statistics:

1. In Manchester among hospital patients suffering from diabetes mellitus, the knee-jerks are lost in from 49 to

50 per cent. of the cases. These patients mostly suffer from a severe form of the disease; 81 per cent. are under the age of fifty years; frequently there is great emaciation, and the cases are often at an advanced age.

2. In private practice, amongst patients who live under more favorable conditions, and in the milder forms of the disease occurring in gouty or well-nourished people over the age of fifty years, the proportion of cases in which the knee-jerks are absent will be much less. (Knee-jerks were absent in 16.7 per cent. of private patients. Eichorst gives the following: Knee-jerks were absent in only 7.6 per cent. Grube of Neuenahr says the same in patients over fifty years.)

3. The knee-jerks when present at an earlier period are frequently lost or diminished later. During the last few days of life the knee-jerks are lost in 73 per cent. of hospital diabetic patients in Manchester.

4. They were lost in 18 out of 21 cases of diabetic coma (86 per cent.)

5. Amongst diabetic hospital patients the knee-jerks are more frequently lost under the age of thirty years than over thirty.

6. Since the course of diabetes mellitus depends on so many circumstances, it is somewhat difficult to estimate the exact prognostic value of one symptom, which is occasionally absent even to the last; but the above facts and considerations seem to show clearly that the loss of knee-jerks is more frequently associated with unfavorable prognostic indications.—*St. Louis Medical and Surgical Journal*, August.

RHEUMATIC AFFECTIONS OF THE HEART IN CHILDHOOD AND EARLY ADOLESCENCE.

J. F. H. Broadbent (*Edin. Med. Jour.*, Vol. XLV, No. 515, p. 473) remarks that although the articular manifestions of rheumatism in childhood and early adolescence are, as a rule, slight, and may be confined to fugitive pains or stiffness in the joints or limbs, with little or no constitutional disturbance, the rheumatic poison may all the time be attacking the heart and setting up endocarditis, pericarditis, or myocarditis in conjunction with one or both of the former. Owing to the insidious nature of the inflammatory process, irreparable damage may be done before the severity of the cardiac symptoms compels the patient to seek medical advice or take to his bed. An illustration of a case in point is given, in which from the time the boy, aged 14 years, first developed some stiffness in the knees until the time of his death, a period of

but fifteen weeks existed, the endocarditis giving rise to no symptoms to announce its presence until almost two months subsequent to the stiffness in the knees. Furthermore, in many cases, the early diagnosis of endocarditis often presents considerable difficulty. When present, it is exceptional for the patient to escape pericarditis. In watching the progress of a case of pericarditis, one of the most striking features to be noted is the rapid increase in the area of cardiac dulness, which takes place even though the patient is kept in bed and carefully nursed and treated. This rapid increase is due, as a rule, not to pericardial effusion, but to dilatation of the heart. In severe cases the cardiac dilatation may rapidly become extreme and the patient succumb within a few days of the first appearance of the pericardial rub, from a syncopal attack, which is sometimes associated with severe vomiting. More commonly, especially in a second attack of pericarditis, the inflammatory process seems to assume a subacute form; the pericardial rub persisting over a varying area for some days or weeks, and the area of cardiac dulness remaining unaltered, and even increasing in extent. Eventually, according to the writer, within from six weeks to three months' time, one of three things may happen.

1. The area of cardiac dulness may decrease till it is nearly normal in extent, indicating that the heart has approximately regained its normal size, in which case a satisfactory recovery may be anticipated 2. The area of cardiac dulness may remain permanently enlarged, though the patient has become convalescent, in which case it is probable that universal adherence of the pericardium to the heart is taking place, and, though the patient recovers, the heart will be permanently crippled. 3. The area of cardiac dulness may still further increase, the liver becoming enlarged, and dropsy set in, and the patient die with all the symptoms of right-ventricle failure. As to prognosis, it seems probable that it depends in each case on the degree to which the myocardium is affected by the inflammatory process. There are certain danger-signals for which one should always be on the look-out in children or young adolescents when a suspicion of rheumatism is aroused, and one can thus recognise the subjects in whom repeated attacks of cardiac inflammation are likely to occur. These are rheumatic nodules, small fibrous growths commonly about the size of a split pea, but sometimes as large as an almond, or even larger. They are found in the neighborhood of joints, over the olecranon or condyles of the humerus, on the margins of the patella, over the malleoli, on the finger-joints, on the sheaths of tendons; sometimes on the scalp or vertebral column, and are attached by their bone to the fascia,

or sheaths of tendons, or to some portion of underlying fibrous tissue. The skin over them is freely movable, and they are best seen by flexing the joint over which they are situated when the skin is rendered tense. In themselves they are painless ; when present in force, danger to the heart is imminent, and repeated attacks of cardiac inflammation are to be apprehended. According to Cheadle, they are apparently serious in proportion to their size and numbers. Rarely found in adults, they are met with in children and adolescents up to the age of 19. Exudative erythemata of the type of erythema marginatum, being small raised patches about the size of a sixpence with sharply defined margins and of a dull red color; or, less commonly papular or urticarial in character, may occur in rheumatic subjects. These have an evil prognostic significance. As regards treatment, it is of the first importance that any indications of danger threatening the heart should be recognized as early as possible, and due precaution taken. The patient should be kept under careful observation and the heart examined every two or three days for some weeks. Any exposure to chill should be guarded against and exercise should be limited in amount. Where possible, children who have once suffered from cardiac inflammation should winter in some warm climate.—*American Medico-Surgical Bulletin*, July.

THE TREATMENT OF ENURESIS.

In an article in the *Therap. Gazette* (Vol. XXII, No. 4, p 220) Dr. Crawford has attempted to introduce order into the therapeutic chaos which is hanging about the subject of enuresis. We must, of course, always try to find the cause. Where anemia is present, some light preparation of iron in conjunction with nux vomica often succeeds. If a rheumatic diathesis is established—and the author has been struck with the frequency with which rheumatism either in the parents or child is associated with enuresis in the latter—the salicylates should be given a trial, but not to the exclusion of iron. Removal of adenoids has several times resulted in the author's hand in a perfect cure of the enuresis. Tea in the evening should be proscribed, and the state of the alimentary canal watched, as enuresis, like convulsions, may often be traced to some digestive derangement. Belladonna is a valuable adjuvant remedy, but it will be in vain to expect from it specific virtues. Where belladonna alone fails, belladonna and iron will often succeed. Belladonna the author gives in large doses ; he commences with 10 to 15 drops of the tincture 3 times a day for a child of 4 to 5 years, increasing

weekly by *five* drops to *each dose*, till there is some sign of improvement or of physiological reaction. The U. S. P. tincture is 15 per cent., while the British is only 5 per cent., strong.

After the belladonna has had its favorable effect, it is of the utmost importance not to stop it abruptly, or a recurrence of the habit is almost certain to take place. When weakness of the sphincter of the bladder is superadded to irritability of the muscular coat, no combination is so beneficial as that of belladonna and nux vomica ; it often acts like magic. Ergot and rhus aromatica are inferior to nux vomica, but may be prescribed in conjunction with it. As regards the interrupted current,the author can offer no opinion, never having employed it in this disorder. High acidity of the urine is a well-recognized condition in enuresis, and where it is present, a few drops of liquor potassæ should be given with belladonna, until the urine shows a neutral reaction. The amount of water should never be cut down ; on the contrary it should be given freely to diminish the concentration of the urine ; or instead of it milk might be supplied, it being one of the best diuretics. Phimosis should be relieved, either by simple dilatation of the orifice, or, in exceptional cases, by circumcision. The author is not in favor of this latter operation, as he has seen more than one case of enuresis that has dated definitely from circumcision. Occasionally, masturbation may be a causal factor; the application of cocaine to the hypersensitive part of the urethra and the daily passage of a catheter do good in those cases. The bromides may also be indicated.—*American Medico-Surgical Bulletin*, July.

SURGERY.

IN CHARGE OF

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ABSORBABLE OR NON-ABSORBABLE SUTURE-MATERIAL.

Dr. Seth C. Gordon concludes an article on the above, subject with the following summary (*Jour. of Med. and Science*, p. 303, July, 1898):

1. All suture-material unabsorbed must necessarily have more or less exudate about it.

2. Such exudate is of lower vitality than normal repair, where tissues are just approximated and not strangulated.

3. A few days only are necessary to insure repair, if there be no infection, and therefore in cases where no great amount of strain exists absorbable sutures only are needed.

4. Where continual strain on the parts is inevitable, non-absorbable suture should be used for at least two weeks, but should be so placed as to be removed.

5. For such suture the silkworm-gut seems to be the best, as it can be made sterile and kept so,

6. For all other purposes catgut is sufficient.

7. Inflammation is always destructive to complete repair.

8. Inflammation is always due to infection.

9. Sterile catgut or kangaroo-tendon should therefore fulfil all indications for suture or ligature-material, with exceptions named.—*Am. Med. Surg. Bull., Oct.* 29, 1898.

TREATMENT OF TUBERCULAR PERITONITIS BY LAPAROTOMY.

Prof. Duplaz (*Le Bull. Med.*, No. 54, July 6, 1898, p. 653) in a clinical lecture says that the prognosis of all tubercular affections is grave, but there is a particular gravity in a tubercular infection of the peritoneum, especially when ulcerative. However, cure is possible either spontaneously or by the operation to be described. Here, the medical management of tuberculosis must give place to the surgical, since laparotomy has become the successful means of cure.

Leaving aside miliary or granular peritonitis peculiar to children where surgical treatment is not to be thought of, there are three chief varieties.

1. Ascitic—serous effusion into peritoneum, sometimes sero-purulent, or even sanguinolent. Here the peritoneum is injected, deprived of its gloss, and sometimes has fibrinous deposits.

2. Ulcerous, or fibro-caseous. This has an abundant production of false membranes forming considerable thickenings. even tumefactions of the peritoneum. Numerous adhesions exist both between the opposing parts of the peritoneum and between these and the viscera. Here and there are accumulations of sero-purulent liquid, and occasionally softened cheesy masses. In this kind perforations are frequent and stercoraceous abscesses occur.

3. Fibrinous, or dry, peritonitis. No liquids, but adhesive inflammatory exudates whose fibrinous transformation tends to cause regression of the tubercles around which they form.

In addition to these general forms there are circumscribed forms which also admit of successful handling in this way.

According to Roersch, it is in the ascitic form that laparotomy gives the best results. In *Rev. de Chirurg.*, 1893, 358 cases are analyzed, the ascitic giving 75 per cent. of cures; the fibrinous, 65; the ulcerous, 60. Many cases published since these of Roersch confirm his report, even making the results better. Sometimes the cure is only temporary, but autopsies on many cases of this kind who have died of accidental causes show the cure to have been effectual. The forms which most frequently get well of their own accord are those which belong to the class most favorable for operation, viz., those in the ascitic and dry forms. The unexpected successes accompanying the operation, in the gravest cases, where operation would even seem to be contra-indicated, leads the author to say that it may be adopted in all three classes of cases, especially if done early.

Three positive contra-indications are (1) advanced pulmonary tuberculosis; (2) grave visceral tuberculosis, of intestines, liver, or kidneys; (3) profound general enfeeblement.

Laparotomy is done in the usual way along the median line, taking special care to avoid wounding the intestines which may be adherent to the peritoneum. Evacuate ascitic fluid, wash out with antiseptic solution or sterilized water at 38° or 40° C. (100.4° to 104° F.) In the fibrinous form adhesions are to be gently broken up on either side. In the ulcerous-caseous form adhesions are to be broken up still more gingerly only for the purpose of getting at and evacuating and cleansing all pus-pockets. Before closing up dust light sprinkle of boric acid or iodoform over the peritoneum. Drainage is not to be used except in cases where pus-pockets have been cleaned out

How simple opening of the abdomen in these cases cures, the author does not pretend to say. He mentions the guesses advanced—removal of liquid removes micro-organisms and removes pressure from the blood-vessels; it admits air and light; it sets up reactional irritation; reflex excitation of the nervous system produces nutritive changes and consequent regression of the tuberculous products; more or less intense phagocytic reaction is set up, scattering and disintegrating the tubercles as fast as fibrous tissue can surround them to displace the inflammatory.—*Am. Med. Surg., Oct.* 25, 1898.

RESECTION OF THE OUTER TWO-THIRDS OF THE CLAVICLE FOR MALIGNANT DISEASE—RECOVERY WITH FULL USE OF THE ARM.

Marcel S., 10 years old; no special hereditary history. In April he noticed that the movements of the right arm were painful and difficult; he was unable to join in play with his comrades. Later a tumor involving the shoulder was discovered.

He was examined by Professor Delassus on May 10, when a tumor was detected at the anterior superior segment of the right clavicle. This was about the size of an egg, its long axis in the direction of the shaft of the clavicle.

It was immovable, resistant and painless. There was no invasion of the ganglia, no muscular atrophy nor impediment to the circulation. There was no pain night or day.

The growth was diagnosed sarcoma, involving the outer two-thirds of the clavicle.

The operation for its removal was undertaken on May 17, and was attended with great hemorrhage,

After removal of the bone and tumor with which it was incorporated, the tibia of a freshly-killed rabbit was inserted.

On the 4th of June, 18 days after operation, the boy was able to quit the hospital.

The imbedded rabbit's tibia had produced suppuration and become discharged. Later the wound healed solidly, when the full use of the arm was restored.

The microscopical examination demonstrated the neoplasm to be a spindle-celled sarcoma, which certainly leaves the prognosis very sombre.

Note.—The writer has been long interested in shoulder lesions, and has always maintained that the clavical being absent in the most agile and powerful quadrupeds is probably essential neither for strength nor mobility in many, and hence, since by modern methods its incision is a safe surgical

—Communication a la Société Anatomo-Clinique de Lille, Journal des Sciences Medicales de Lille, Numero 36, 3 septembre, 1898.

procedure, in all tumors arising in it the whole shaft should be boldly dislodged in order to obviate the chances of later dissemination. T. H. M.

INTESTINAL OBSTRUCTION IN THE COURSE OF PYELEPHLEBITIS.

By DR. J. MAGNAU.

The causes of intestinal obstruction are many, but we seldom hear of it resulting from obliterative phlebitis of the portal or mesenteric veins.

It was in 1878 Chuquet for the first time called attention to grave lesions of the small intestine, which may result from pyephlebitis, at the time insisting on three points; first, that these cases are more common in the alcoholic, whose blood is reduced in fibrin, and again by the blood changes resulting in cirrhosis, and, finally, he compared the sanguinous infiltration of the intestinal walls to that witnessed in sphacelus of the intestine. In 1888 Dreyfus published three cases, in which he set forth the site of thrombosis. He remarked that the condition of the intestine found much resembled that seen in strangulation. In 1889 Pilliet published two new cases. He described the pathological changes found, and, singularly enough, compares the condition involving the circumvolutions of the bowel, as markedly resembling an annular construction. According to this observer, the initial focus in operation here is germ invasion; next phlebitis and thrombosis.

In 1894 Peron and Baussenat described a case in a pregnant woman who suddenly died after an acute attack of peritonitis, in whom, on autopsy, was found the entire portal system thrombosis. This had led to multiple asphyxia and necrotic perforation of the intestine.

In June, 1897, MM. Letielle and Maygrier reported patient six months pregnant, suddenly sinking from acute peritonitis, in whom, on autopsy, was found phlebitis of the grand mesenteric vein, apoplexy of the jegunal division and a perforation 60 centimetres in length, widely opening the bowel. Later M. Barth has recorded a case, in 1897, of a patient who suddenly sunk from symptoms of intestinal obstruction, in whom he discovered a primary mesenteric phlebitis with extensive thrombi.

The diagnosis of this condition is exceedingly obscure. Of the morbid anatomy we know much, but of the pathology nothing definite. It seems we are in the dark in treatment because the condition develops so insiduously, and mortal changes have set in before we are even suspicious of the actual causes in operation.—*Bulletin du Lyon Medical.*

THE ACTION OF SYMPATHICOTOMY ON THE EXOPHTHALMIA AND TACHYCARDIA IN A CASE OF EXOPHTHALMIC GOITRE.

Combermale and Gaudier (*Gaz. Hebdom de Méd. et de Chir.*, April 24, 1898) report an interesting case in which Jaboulay's operation produced the following results. The patient was a female in whom, for some unknown reason, a goitre began rapidly to increase in size and was accompanied by exophthalmia, tachycardia and all the symptoms of hyperthyroidization. No medicine appeared to have any effect; the heart could not be calmed, and its increasing action threatened the life of the patient. Recourse was had to section of the cervical sympathetic. The results were: 1. An immediate diminution in the exophthalmia. 2. A decrease of the pulse during a week from 200 to 100 per minute and at the same time the disappearance of præcordial pain. 3. Absence of any modification in the goitre itself.

The cessation of palpitation, the lessened dyspnœa and disappearance of angina caused sufficient relief to make the patient satisfied with the operation, while the disappearance of the tachycardia and of the other dangerously threatening symptoms recompensed the operators.

The sudden drop in the pulse the authors would ascribe not to any direct action or to action through the contiguity of these nerves to nerves about the heart; it was delayed in appearing, and did not take place immediately. They agree with Werthimer in believing that the thyroid fibres of the sympathetics after the section of the main trunk cease presiding over the activity of the thyroid secretion which causes the tachycardia, and that the rapid action of the heart ceases because the cause is thus stopped.

The fact that the goitre did not decrease in size would tend to show that the operation had no effect on the colloid matter excreted. In the normal state both vary in the amount physiologically secreted. We see small goitres that produce hyperthyroidization, and it is perfectly admissible to suppose that the section of the sympathetic may prevent the secretion of the toxin without interfering with the secretion of colloid material.

If this is true, the section of the sympathetics in cases where exophthalmia and tachycardia are the menacing symptoms is the operation of choice.—*Am. Journal of the Med. Sciences, Nov.* 98.

THE TREATMENT OF VEGETATIONS ON THE GENITALIA BY RESORCINE.

Silbermintz (*Gazette des Hôpitaux*) employs resorcine in the following manner in destroying vegetations situated in the region of the genital organs. If they are isolated and have pedicles surrounded by normal skin, he paints them with pure resorcine, using a brush slightly moistened and covering them over with dry dressing. The applications are repeated daily till they dry up and drop off. When they are multiple and sessile, situated on the prepuce, the glans, in the balino-preputial groove, the inguinal fold, about the anus or around the vulva, he paints them over with a collodion containing ten per cent. of oil and twenty per cent. of resorcine. The parts should be made perfectly dry and the collodion should extend an eighth of a inch upon the surrounding sound skin. After the first application, the epidermis wil be removed with the collodion, and successive layers with elach application till finally an ulcer results, pitted where the roots have been removed. Slightly astringent dusting powders will rapidly heal it. Where the skin is dry, as on scrotum or external aspect of the labia majora, the author employs a 50 per cent. resorcine collodion. In all cases a boric acid wash should be ordered in conjunction with the applications.—*Inter. Med. Mag., Oct.*, 98.

THE TREATMENT OF CHRONIC ULCER OF THE LEG.

Charles H. Thompson, M. A., M. D. (*Lancet*, August 27, 1898), has employed strapping with success in forty cases of leg ulcer. Nearly all had had months of hospital treatment up to the time strapping was commenced, but with little or no improvement ; in some instances the ulcers extended. Many of the patients had varicose veins, and œdematous legs, and they almost invariably expressed themselves as much relieved soon after treatment was begun. The strappings were made with the ordinary adhesive plaster spread on stout, pliable holland and supplied in 12-yard rolls 16 inches wide. It must be cut into various lengths according to size of leg, each length being about 1¾ inch wide, and applied so that the strips overlap by ⅓ inch. It is best to include the foot, commencing at the base of the toes and carrying the strapping up the leg to three or four inches above the ulcer, which is thus completely covered in. A strong cotton bandage should be applied over all, reaching from the toes to the knee, and this should be changed by the patient

daily or as often as it becomes soiled. If vesicles and excoriations form, an ointment composed of equal parts of zinc ointment and soft paraffine, applied on lint, the whole being covered with strapping and care being taken not to allow the lint to come too close to the ulcer.—*International Medical Magazine, Oct.*, 98.

STAB WOUND OF THE THORACIC DUCT.—RECOVERY.

W. H. Lyne, M. D. (*Maryland Med. Jour.*, September 10, 1898), reports the above condition in a negro, 24 years old, of splendid physique. On examination an oblique stab wound about one inch long, depth unknown, was found above and behind the left clavicle and parallel with the outer border of the sterno-cleido-mastoid near its attachment. A longitudinal wound of the thoracic duct was the one therefore possible. The hemorrhage had stopped, but an abundant milky fluid was steadily escaping from the wound. The wound was cleansed with hot carbolized solution, and packed with iodoform gauze and bandaged. On removing the dressing about seven hours thereafter, the escaping chyle and oozing had completely stopped, and the dressing was reapplied. The patient was allowed a light diet; his recovery was prompt and uneventful, except for a slight suppuration. The patient was discharged nine days after his admission, complaining only of a slight stiffness of his left arm. He was seen two years afterwards, and was enjoying perfect health, weighing ten pounds more than he ever weighed before the accident. No miscroscopical or analytical examination of the chyle was made.—*Inter. Med. Jour.*, *Oct.*, 98.

OBSTETRICS.

IN CHARGE OF

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THE QUESTION OF OBSTETRIC DOUCHING.

Robert Jardine, Physician to the Glasgow Maternity Hospital (*British Medical Journal*), concludes that in an ordinary case ante partum douching is unnecessary, and in fact is as likely to do harm as good. "If an antiseptic like corrosive sublimate is used, it will corrugate the tissues, hinder the descent of the presenting part, and render the tissues far more liable to be lacerated." A douche before delivery is necessary only when there is a purulent or putrid discharge from the vagina, or when any intrauterine operation needs to be done. An immediate and copious post-partum vaginal and uterine douche is indicated in the following conditions:—

1. Post-partum hemorrhage—very hot.
2. Purulent discharge previous to labour.
3. Putrid fœtus.
4. Introduction of hands or instruments into the uterus.
5. Considerable laceration of parts or very prolonged labor.

During the puerperium the writer holds, the douche is quite unnecessary unless the lochia become putrid or when the temperature rises and there is evidently something in the uterus. According to the writer, the best confinement douche is a 1 per cent. Lysol. solution.

NOURISHMENT OF A WOMAN DURING THE PUERPERIUM.

In the *Wierr Med. Blaetter*, attention is called to the wrong ideas which many physicians hold in regard to the amount of nourishment which a woman should receive immediately after childbirth. It is a well-known fact that after a surgical operation, nourishment is given to the patient as frequently as it is safe to do so, and in generous quantity. On the other hand, a woman who has borne a child is often kept for days upon a little tea or zweiback or thin gruel when in reality, she should be receiving a very nutritious and abundant diet. This is a bit of ancient tradition which has come to us from the time when puerperal fever was common, and when it was supposed to be dangerous to feed anything to the mother of a newborn child for several days. How unreasonable this idea is has repeatedly been demonstrated clinically,

SORE NIPPLES, THE PREVENTION OF.

The following method has proved unusually successful in the prevention of sore nipples:

℞ Lanolin (Liebreich), 1 ounce.

Dispense in glass or porcelain screw-cap jar.

Sig.: For external use every night.

The patient is instructed to begin its use from four to six weeks before the expected date of confinement and continue until delivery. Every night at bedtime a small portion of lanolin is thoroughly worked into each nipple with the thumb and fingers, special pains being taken to rub it well into any folds or crevices, especially in the case of depressed and sunken nipples.

In the morning it should be removed by a soft nail-brush, which is well soaked. The nipple should be brushed with luke-warm water, and any mild, pure soap (preferably a white soap), giving it a thorough lathering for three or four minutes. It should afterward be rinsed with fresh water and dried as after ordinary bathing. All these agencies combined develop the cuticle, render it firm, elastic, and resisting, and produce a useful nipple, which may be almost guaranteed against subsequent abrasions and tenderness.—J. Milton Mabbott.

THE TOPICAL USE OF ALCOHOL IN PUERPERAL INFECTION.

Dr. George H. Noble strongly advocates the local application of alcohol to the endometrium in cases of infection confined to the uterine cavity. After thoroughly cleansing this cavity a sterile rubber catheter is introduced having attached to its tip a strip of sterile gauze as wide as the thumb and two yards long. The gauze is packed loosely about the catheter and serves to retain the alcohol (95 per cent.), a few drachms of which are injected through the catheter every quarter or half hour until marked improvement has taken place, then gradually lengthening the intervals. The projecting end of the catheter must be kept thoroughly buried in sterile or antiseptic gauze in the intervals between injections. The writer refers to a number of cases which were not doing well under the ordinary treatment by curettage and bichloride douching, and which responded promptly to the use of alcohol in the manner stated. He explains the beneficial effect of this agent as being due probably to its dehydrating action upon the tissues, thus depriving the germs of that moisture which is necessary to their development.

VOMITING OF PREGNANCY.

Of medicinal agents for the vomiting *per se*, the best combination I have found consists of :

℞ Cocaine hydrat., gr. j.
Bismuth subnit., ʒ iv,
Milk magnesia, ℥ ij.
Aq. lanno cerosi,
Aq. cinnamoni, aa. ℥ ij.

M. et Sig. Two teaspoonfuls every hour or two apart.

This may be followed by crushed ice, not only by the mouth, but applied to the cervical vertebra by means of ice bags, to avoid wetting the patient.—*Louisville Med. Mon.*

DRY LABOR—ITS DANGERS AND TREATMENT.

Dr. G. L. Brodhead (*Medical Record*) thinks this subject too little discussed in text-books, and too often overlooked in practice. A dry labor is one in which the membranes rupture before pains have begun or before cervical dilatation has been accomplished. According to Brodhead's experience at Sloane Maternity, 15 per cent. of all cases have dry labors.

In cases of this class there is danger that œdema of the cervix will occur, and the labor is always more tedious. The child is subjected to the chance of asphyxia and meningeal hemorrhage. Especial attention should be directed to the signs indicating the above conditions. When meconium is found on the examining finger or is seen escaping from the vagina, immediate delivery must be accomplished. An effort should be made as soon as membranes have ruptured to hasten labor. Large doses of castor oil and glycerin, followed shortly after by ten grains of quinine sulphate, are recommended. These drugs aid by increasing the strength and number of contractions.

REMEDY FOR RIGID PERINEUM.

In rigid perineum, Dr. Southworth says that he who tries the following will never be without it. He consider it indispensable and infallible.

℞ Chloroform, ʒ ij
Ether Sulphuricum, ʒ j
Cologne Spts., ʒ j
Misce. Sig. Apply locally.

He further says :—" It acts quickly and well. I have had large heads pass perineums which seemed impossible without extensive rupture, without the beginning of a tear even when this preparation was used.

GRIPPE AS A COMPLICATION OF PREGNANCY AND THE PUERPERAL STATE.

In *L'Obstétrique* Bar and Boullé report their observations upon fifty women who had grippe during pregnancy or the puerperal state.

In pregnancy, grippe affected the nervous system profoundly in one case, the gastro-intestinal tract in two others, while in the majority the respiratory organs were attacked. In one of the intestinal cases, pyelitis developed, caused by infection with the colon bacillus. The majority of pregnant women in whom grippe affected the respiratory organs recovered without especial difficulty. A small number had pneumonia, which proved a serious complication. In one patient otitis and meningitis developed, both caused by the pneumococcus. The sputum of these patients showed abundant pneumococci.

So far as the influence of grippe on the continuation of pregnancy was observed but a very few cases had metrorrhagia. Labor itself was not especially influenced by grippe. In one case in which the delivery was artificial a severe hemorrhage occurred. The placenta in these cases was found to be normal.

In the puerperal condition, grippe sometimes occasioned severe complications. Mixed infection with streptococci occurred in some cases, and in one proved fatal. In several patienta pulmonary infection with the pneumococcus and genital infection with the streptococcus were present in the same patient. It was observed that mixed infections were especially severe ; thus, in one case of pneumonia in the puerperal state, there was phlebitis of the external jugular and cephalic veins, in another case the pulmonary lesions were accompanied by endocarditis.

PREGNANCY WITH AN UNRUPTURED HYMEN,

Albespy reports the case of a young woman, 23 years of age, who assured him she had only had intercourse once with her lover, which had proved very painful, and had not permitted of penetration. He found the hymen intact, and with a very small orifice capable only of being entered by a sound. Labor began next day, and after the discharge of the amniotic fluid the membrane was incised and a speedy parturition without evil sequelæ followed.

Medical Society Proceedings.

EIGHTH ANNUAL MEETING OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION, BUFFALO, N. Y.

The Eighth Annual Meeting of The American Electro-Therapeutic Association was held in the rooms of the Society of Natural Sciences, Library building, Buffalo, N. Y., on September 13, 14, and 15, 1898, under the presidency of Dr. Charles Rea Dickson, of Toronto, Ont.

FIRST DAY.

After the meeting had been called to order by the president, at 10 a. m., an opening prayer was offered by Rev. Orin P. Gifford, after which a brief business session was held, the report of the Executive Council presented, and the privileges of the floor accorded to all members of the medical profession and guests.

Dr. Conrad Diehl, Mayor of Buffalo, welcomed the Association to the City; Dr. Francis B. Bishop of Washington, D. C., responded to the address of welcome. The president announced that delegates had been appointed from medical societies as follows: —Medical Association of Central NewYork, Dr. Wm. C. Krauss, the president; Medical Society of the State of New York also Medical Society of the County of Erie, Dr. Lucien Howe, president of latter; Buffalo Academy of Medicine, Dr. Floyd S. Crego; Ontario Medical Association, Dr. C. Sterling Ryerson, of Toronto. Brief remarks were made by Dr. Henry McClure, of Norwich, England, honorary fellow; Dr. Thomas E. Holland, of Hot Springs, Ark., a guest; Dr. A. D. Rockwell, of New York; Dr. Lucien Howe of Buffalo and others; the president announced that many letters of regret had been received. Dr. Ernest Wende, Buffalo, Chairman of Committee on Arrangements, reported the provisions made for the entertainment of the Association.

Reports of the Standing Committees on Scientific Questions were received; Meters by Dr. Margaret A. Cleaves, of New York; Constant Current Generators and Controllers by Dr. Robert Newman, of New York; Electric Light Apparatus for Diagnosis and Therapy and the Roentgen X-Ray, by Dr. J. J. Carty, E. E., of New York. The following papers were read: Phlebitis, A Clinical Study by Dr. Margaret A. Cleaves, New York; The Diagnostic and Therapeutic Relations of Electricity to Diseases of the Central Nervous System by Dr. A. D. Rockwell, New York. The Association adjourned at 12.30, and was again called to order at 2.00 p. m. by President Dickson. The first paper by an honorary fellow of the Association, Dr. Georges Apostoli, of Paris, France, New Uses of the Undulatory Current in Gynaecology, was read by Dr. G. Betton Massey, of Philadelphia.

Electricity in the Treatment of Uterine Fibromata by Dr. Felice La Torre of Rome, Italy, honorary fellow, was read by Dr. John Gerin, of Auburn, secretary of the Association. Electro-Therapeutics in Gynaecology by Drs. Georges Gautier and J. Larat, honorary fellows, of Paris, France, read by Dr. Dickson, president of the Association.

A paper by Dr. William J. Herdman, of Ann Arbor, Mich., on The Use of Electricity in Gynaecology, read by title, was followed by The Treatment of Uterine Fibroids by Small Currents, Administered Percutaneously, by Dr. Richard J. Nunn, of Savannah, Ga.

Dr. W. H. White, of Boston, read a paper by Dr. Adelstan de Martigny, of Montreal, on Treatment of Menorrhagia by Weak Current and Silver Interval Electrode.

The Association adjourned at 4.30 p. m.

SECOND DAY.

An Executive Session of the Association was held from 9 to 10 a. m., President Charles Rea Dickson, of Toronto, in the chair.

The Report of the Executive Council on the revision of the constitution and by-laws was adopted, making some important changes in the governing rules of the Association.

When the scientific session opened at 10 o'clock, the first paper was presented by Dr. Lucien Howe, of Buffalo. Dr. Howe's subject was The Method for Using Cataphoresis in Certain Forms of Conjunctival Inflammation.

Dr. Howe illustrated his remarks by means of a number of his patients. His paper was received with great interest, and a lengthy discussion followed.

Dr. Robert Newman, of New York, presented an able paper on Electricity in Deafness and Stricture of the EustachianTube. In his address, Dr. Newman rehearsed the history of a peculiar case which came under his professional care. He also cited a number of other cases, which had been reported by other physicians.

The discussion which followed Dr. Newman's paper was led by Dr. Howe, followed by Dr. A. D. Rockwell, of New York.

Dr. Howe presented to the Association a message of regret from Dr. John O. Roe, of Rochester, N. Y., who was called out of the country on business, and was therefore unable to present his paper on The Use of Electricity in Diseases of the Nose and Throat.

Dr. Grover W. Wende, of Buffalo, read a paper on Electricity in Acne Vulgaris and Acne Rosacea.

Dr. G. Betton Massey, of Philadelphia, led the discussion of Dr. Wende's paper, followed by Dr. Margaret A. Cleaves, of New York.

Dr. William C. Krauss, of Buffalo, being ill and under a physician's care, hence he was unable to present the paper set down for him, A Case of Lightning Stroke Without Serious Consequences; it was read by title.

Dr. G. Sterling Ryerson, of Toronto, was introduced by President Dickson, and spoke briefly on Cases of Lightning Stroke causing Diseases of the Eye, giving a number of instances of the effect of lightning, in which the results were not permanently serious.

Dr. Francis B. Bishop, of Washington, presented a paper on

High Tension Current in Neuritis, which gave rise to much discussion.

The final paper of the morning session was read by Dr. Charles Rea Dickson on Electricity in the Treatment of Goitre.

At 1 o'clock the Association adjourned until 2 p. m.

Upon re-assembling, President Dickson delivered his Annual Address, a part of which is as follows:

"For many years past the thoughts of those who are interested in the various branches of this wondrous subject, electricity, have turned to Buffalo, and it has been the Mecca of the Electric Pilgrims. On its outskirts the wildest dreams of the Arabian Nights have been outdone. Science, ever triumphing over nature, has harnessed that most beautiful of all nature's handiwork, and as though by the subtle touch of the wand of a magician, the very country has been transformed, and solitary fields have become veritable hives of human industry, the outcome of the mighty power of Niagara transformed and transmitted. Massive factories are seen on every side where but a few years ago were found naught but vacant lots. To us, witnessing it for the first time, it is a milestone of progress, illustrating man's ingenuity, the triumph of his brain. Buffalo is truly the electrical city of the age.

"Surgery," said Dr. Dickson further on in his address, "is being divided and sub-divided until at one time we feared that we were to be confronted with an appendix surgeon. Our patients are reaping the benefit of all this."

After giving briefly a history of the Association, its growth, the reasons for its existence, and the manner in which its work was carried on, Dr. Dickson concluded his exceedingly interesting address as follows:

"A rock we must avoid is that on which many a stronger society than our own has come to grief, the clique. And the furtherance of personal ambition or personal designs must be shunned."

Many suggestions embodied in the address were referred to the Executive Council of the Association.

Many Buffalo physicians attended the afternoon meeting.

The programme was made up of a series of Ten-minute Talks on Electro-Therapy.

In a brief introduction the President explained the purpose and scope of the Talks which had been prepared for the special benefit of the busy practitioner, technicalities and details being avoided as far as possible, it being intended that the Talks should be suggestive rather than exhaustive.

The Effect of Electricity Upon Tissue Metabolism, by Dr. William J. Herdman, of Ann Arbor, Mich., was read by title. The next paper was by Dr. J. H. Kellogg, of Battle Creek, on the same subject, but Dr. Kellogg also was absent; read by title. Dr. G. Betton Massey, of Philadelphia, presented The Galvanic Current in Gynaecology.

Surgical Uses of Electricity was the subject of a paper by Dr. Charles Rea Dickson, president of the Association.

Next on the programme was a paper by Dr. G. Herbert Burnham, of Toronto, on Combined Use of Medicinal and Electrical Treatment in Some Affections of the Eye; read by title.

Dr. Robert Newman, of New York, presented Electricity in Genito-Urinary Diseases. Dr. G. Betton Massey spoke on Treatment of Malignant Growths by Means of Electricity.

Dr. Louis A. Weigel, of Rochester, on Orthopaedic Uses of Electricity, was followed by Dr. Rockwell on The Functional Neuroses with Special Reference to Neurasthenia, their Pathology and Treatment.

Dr. Herdman's paper on Electricity in Diseases of the Nervous System was read by title.

The Association adjourned at 4.30 p. m.

A short business session was held from 8 to 9 p. m., at which the following officers were elected :

President—Dr. Francis B. Bishop, of Washington.

First vice-president—Dr. Ernest Wende, of Buffalo.

Second vice-president—Dr. W. H. White, of Boston.

Secretary—Dr. John Gerin, of Auburn.

Treasurer—Dr. Richard J. Nunn, of Savannah, Ga.

Executive Council—Dr. Robert Newman, of New York, and Dr. G. Betton Massey, of Philadelphia, three years; Dr. A. D. Rockwell and Dr. William J. Morton, of New York, two years ; Dr. Charles R. Dickson, of Toronto, and Dr. Frederick Schavoir, of Stamford, Conn., one year.

Washington was selected for the Convention next year, to be held September 19-21, 1899.

THIRD DAY.

An Executive Session was held at 9 o'clock. President Dickson in the chair.

A resolution was passed upon urging colleges and medical schools the necessity of establishing chairs for the teaching of electro-therapeutics ; or if that is not at once practicable, that more time be devoted to the teaching of this very important branch ; and that the matter be more fully urged upon the attention of The Association of Medical Colleges. Many new members were elected, and the customary votes of thanks passed.

The congratulations of the American Electro-Therapeutic Association were extended to the University of Buffalo for its progression in establishing a chair of electro-therapeutics in the medical college.

A general vote of thanks was also adopted, expressing the Association's deep appreciation of the courtesy and hospitality extended to the members during the convention in Buffalo.

At 10 o'clock the Executive Session adjourned, and President Dickson called the Scientific Session to order. The first two papers on the programme were read by title. They were both by Drs. Georges Gautier and J. Larat, of Paris, France, the first on The Hydro-Electric Bath with Sinusoidal Current in Disease ; the second on The Use of the Hot Air and Light Bath in Disease.

A paper was read by the newly-elected President of the Association, Dr. Francis B. Bishop, of Washington, on Alternating Dynamo Currents.

Dr. Margaret A. Cleaves, of New York, read a paper on The Electric Arc Bath.

A paper by Dr. J. H. Kellogg, of Battle Creek, Mich., on The Electric Light Bath, was read by title. The next paper was by John J. Carty, of New York, a well-known electrical engineer, on Some Suggestions on the Possibilities of Cataphoresis. Mr. Carty gave a short, practical talk, which was very interesting.

Then came a paper by Nikola Tesla. The paper was read by Dr. White, of Boston. The subject was A High Frequency Oscillator for Electro-Therapeutic Purposes. It was received with the closest attention, and was one of the most interesting papers presented during the Convention. Mr. Tesla's paper was the last read before the Association, the remainder of those on the programme being read by title as follows:

The Effect of High Tension Discharges upon Micro-organisms —Drs. J. Inglis Parsons and C. Slater, London, England.

The Action of X-Rays upon Tuberculosis—Drs. J. Bergonie, Bordeaux, and Teissier of Paris, France.

Two Years of Practice in Radiotherapy—Drs. Georges Gautier and J. Larat, Paris, France.

Dr. Newman, of New York, and Dr. Nunn, of Savannah, Ga., were appointed a committee by the President to conduct the President-elect, Dr. Bishop, of Washington, to the chair. Before turning over to his successor the gavel and other insignia of office, Dr. Dickson took occasion to thank the Association for its kindness and courtesy to him during his term of office. His little speech was very graceful and sincere, and was received with hearty demonstrations of approval.

Dr. Bishop spoke of the pleasure it afforded him to take the first place in the Association, at the head of the governing body. He said that he deeply appreciated the honor that had been shown him, and asked for the hearty co-operation and help of all the members.

Shortly after noon, the new President of the Association declared the Eighth Annual Convention of the American Electro-Therapeutic Association closed.

The social side of the meeting was by no means neglected. Dr. Ernest Wende, Health Commissioner of Buffalo, had charge of the local arrangements for the comfort, convenience and entertainment of the visitors, and too much praise cannot be accorded for the manner in which his plans were carried out.

A public reception in honor of the members was held on Tuesday evening, 13th, in Alumni Hall, University of Buffalo building, which was largely attended, many medical men of Buffalo being present.

The duties of Chairman were performed by the President of the Association, Dr. Charles Rea Dickson, of Toronto, who made a few remarks, in which he spoke of the fraternal feeling existing between the two great English-speaking nations at the present time. Dr. Henry R. Hopkins, of Buffalo, a member of the Local Committee on Arrangements, spoke of the earnest work of the medical men in this country. Dr. Robert Newman, of New York, made a brief address, as did Dr. G. Sterling Ryerson, of Toronto.

Rev. O. P. Gifford, D. D., pastor of the Delaware Avenue Baptist church, in the course of a most amusing address said that

he knew of no other professions so closely allied as the ministry and medicine. "When you succeed," said he, "we profit by your success. When you fail, we bury your errors."

On Wednesday afternoon on adjournment, a special car was in waiting at the door of the place of meeting, and accompanied by Mayor Diehl a visit was paid to the power-house of the Buffalo Railway Co.; great interest was manifested in the plant, and in the storage batteries, which are the largest in the world. On completion of the visit, the members returned to headquarters at Hotel Iroquois by special car and Tally-ho coach.

Dr. Lucien Howe entertained the men of the Association in the evening at the conclusion of the business meeting. A smoker was given at Dr. Howe's home, corner of Delaware avenue and Huron street, which was largely attended.

Thursday afternoon was devoted to an excursion and reception, under the direction of the Local Committee of Arrangements, The "Huntress" left the foot of Ferry street at 2.30 o'clock, taking the members of the Association down Niagara river to Navy and Buckhorn Islands and the site of the Pan-American Exhibition, then to the Island-Club, where a reception was held, followed by a dinner. The return trip was arranged to get the members back to Buffalo before 9 o'clock.

On reaching the city the majority of members proceeded to Niagara Falls, N. Y., direct, the International Hotel being headquarters.

On Friday morning the view was obtained from the celebrated Steel Observation Tower; the party next took the Niagara Falls Park and River Railroad, crossing by the new steel arch trolley bridge, the greatest steel arch bridge in the world, going first to Chippewa then to Queenston, crossing by ferry to Lewiston, N. Y., and returning to Niagara Falls by Niagara and Lewiston Railroad.

After lunch the members were conducted over the Power House of the Niagara Falls Power Company, by Coleman Sellers, E. D., President and Chief Engineer, who made the visit most interesting and instructive. On return to the hotel, a meeting was held, and Dr. C. R. Dickson was requested to convey to Dr. Sellers the thanks of the Association for his courtesy. A very enjoyable trip was next taken on the "Maid of the Mist," after which most of the members left for their respective homes. Those who remained visited on Saturday morning Power Station No. 2 of the Niagara Falls Hydraulic Power and Manufacturing Company, and were conducted over it by the chief electrician, who fully explained all the wonderful appliances.

In addition to the many other provisions for the entertainment of their visitors, the Committee on Arrangements provided tally-ho coaches which made tours to Buffalo on Tuesday afternoon and Wednesday morning and afternoon, leaving from the Library building; members were also invited to enjoy bird's-eye views of the city from the roof of the Guarantee Building, Church street, the tallest building in Buffalo; and to visit the collections of the Society of the Natural Sciences, Historical Society and the Gallery of Fine Arts, in the Library building, in which the meetings were held.

Very handsome badges were prepared for the members and

officers by the Local Committee. For members the badges were of bronze, and for officers of gold. A buffalo formed the pin, from which depended by a ribbon a triangular pendant, bearing the name of the Association, the date and the name of the Convention city. The ribbon for officers was yellow, that of members red.

A most interesting exhibition of electrical apparatus for diagnostic, therapeutic and radiographic purposes was held in the room adjoining the Meeting hall, and was a very popular feature of the meeting. The following manufacturers exhibited: Van Houten & Ten Broeck, New York; Chloride of Silver Dry Cell Battery Company, Baltimore Md.; Jerome Kidder Manufacturing Company, New York; Edison Manufacturing Company, New York; Waite & Bartlett Company, New York; Dow Electric Assistant Company, Boston, Mass.; American Electro-Neurotone Company, Niagara Falls, N. Y.; Standard Cold Electric Lamp Company, Washington, D. C.; Spencer Lens Company, Buffalo, N. Y.; Detwiller-Biddle Company, Buffalo, N. Y.; W. J. Shields & Company, New Wilmington, Pa.; Rochester Fluorometer Company, Rochester, N. Y.

The Eighth Annual Meeting was universally conceded the most successful and enjoyable that has been held, and the prospects for the Association were never brighter or more encouraging. Arrangements are already in progress for the Washington meeting.

THE
CANADA MEDICAL RECORD

PUBLISHED MONTHLY.

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

THE SIGNIFICANCE OF URIC ACID IN THE NASAL REFLEX NEUROSES.

Walter A. Wells, M.D., of Washington, D.C., in an interesting paper in the New York *Medical Journal*, Nov. 12, 1898, discusses this subject in an instructive manner, and throws some additional light on the role enacted by uric acid. In regard to the pathogenesis of the nasal reflex neurosis, Dr. Wells contends that a diathetic condition obtains, consisting of an instability of the vasomotor sympathetic associated with an increase of eosinophilic white blood-corpuscles during the attacks associated with increased production and excretion of uric acid. The latter occurs in such nasal neuroses as asthma, migraine, neuralgia, epilepsy, angina and exophthalmic goitre ; it also occurs in hysterical affections and Raynaud's disease, neurasthenia, etc. Haig's theory is that uric acid is formed in a definite ratio, and its increase in the blood is owing to retarded eliminations, this depending on a diminished alkalinity of the blood. The retained uric acid is then deposited in the arterioles and capillaries of different parts of the body, causing various manifestations according to the locality. Dr. Wells thinks this mechanical action is not sufficient to explain all the phenomena, but the theory of irritation of the sympathetic nervous centre does. The most eminent authorities now

hold that uric acid is the result of decomposition of cellular elements in all parts of the body, and the leucocytes are the chief sources, and it varies in the amount produced according to the percentage of leucocytes in the blood, being increased in all affections where leucocytosis is present. The apparent exception to the rule Dr. Wells explains as follows: Agents in the blood having a chemiotactic influence may cause the leucocytes to be attracted away from the central organs to the peripheral circulation, so that blood examined from this part would indicate leucocytosis when there would be no actual increase from the normal, which is quite different to an increased production of new cells raising the total number. He claims that the more mature and more active multinuclear leucocytes respond more readily to chemiotactic influence than the young uninuclear form, so that the apparent leucocytosis chemiotactically produced would be multinuclear, but when real leucocytosis is present, an increased production of young uninuclear cells from the hæmatopoietic organs obtains, as in leucæmic chlorosis, diabetes and the leucocytosis of digestion. The increase of uric acid follows the increase of the uninuclear cells rather than the older multinuclear. But the increase is present also in cancer and pneumonia when there is a multinuclear leucocytosis; this he explains may result from the possibility that chemiotactic substances which drive the old cells to the periphery, causing a relative leucocytosis, may also stimulate an increased production of young cells while typhoid fever has been given as an instance of the increase of uric acid not dependent upon a leucocytosis, this being one of the very few fevers in which a condition of leucopænia occurs—that is to say, lessened number of the leucocytes. But, if viewed from the standpoint here taken, the apparent inconsistency may disappear. Examinations of the blood in typhoid go to show that, though the multinuclear cells are decreased, at the second or third week there occurs a lymphocytosis. This agrees with the studies recently made in this disease by Behrend and Adler (*National Medical Review*, Washington, April, 1898), according to which the excretion of uric acid rises notably toward the latter part of the disease.

If we should continue to bear in mind, then, the fact that we can only be sure that there has been any actual increase of the leucocytes when we see an increase in the uninuclear cells (lymphocytes, splenocytes, myelocytes), we shall understand how we may reconcile the theory of the formation of the uric acid from the disintegration of the leucocytes with the observation that in some cases of leucocytosis there is little or no uric acid while in others it is notably increased.

As this has been the only objection against this theory of the formation of uric acid, we have then, admitting the correctness of the premises, no further difficulty in accepting it, and we are left only to prove that a leucocytosis of young cells occurs in the class of cases which we are studying as nasal reflexes in order to conclude that the uric acid is thence derived.

Leucocytosis he claims does occur in the nasal reflexes in the form of an eosinophilia from sympathetic irritation. A general lymphocytosis is said to occur in convulsive disturbances which may manifest themselves as a nasal neurosis. Striking is the observation of a leucocytosis, chiefly of the lymphocytes, occurring in exophthalmic goitre, as this disease has been reported in rare instances to be cured reflexly by way of the nose.

It appears to us then manifestly illogical to consider, as Haig and his followers do, that uric acid bears a causative relation to these attacks, seeing that we have the best reason to believe that it is formed from the leucocytes, and is therefore only an incidental phenomenon. That it could not be the cause appears still less probable from the fact that frequently enough there may be uric acid increase with no sign of any of those kinds of affections which have been attributed to it.

Some authors, denying to uric acid the position of primary and essential cause in the cases we are discussing, say, however, that the xanthine bases should be so regarded, as, for example, Kolisch, who, finding an increase of xanthine and paraxanthine during attacks of migraine and epilepsy, concludes that these agents directly cause the attack.

When the nuclein of the white blood-corpuscles becomes broken up, substances are formed which if oxidized become uric acid, and if decomposed go to form xanthine bases.

Now, if we follow Neusser and say that xanthine irritates the sympathetic, and by irritation of the sympathetic causes a new production of eosinophilic leucocytes, it is apparent we allow ourselves to fall into a vicious circle.

The xanthine or paraxanthine or allied substances—the so-called alloxuric bodies—ought then just as uric acid to be looked upon as incidental products, and the sympathetic irritant, whatever it may be, be sought elsewhere.

The source in cases of pure nasal reflexes may be found in the existing pathological condition in the nose, whence goes the impulse that sets the sympathetic ganglia in action, demonstrated by the increase in the number of the eosinophilic leucocytes.

As sometimes we have asthma, migraine, and the like arising reflexly from other sources than the nose, especially from diseases of the reproductive organs; these two may be regarded as sources of sympathetic irritation.

The cause of general leucocytosis may sometimes be toxines, the result of intestinal self-intoxication which may act chemiotactically on the leucocytes and irritates the sympathetic.

If uric acid does not produce the symptoms, how is it, it may be asked, that headache is brought about by the administration of substances that cause an increase of uric acid in the blood, and that headache, asthma, etc., seem to be lessened by the exhibition of agents, as contended by Haig, that render the blood alkaline and cause a diminution of the uric acid? As to the former, we can readily understand that the agent given has acted as an irritant to the sympathetic nervous system, and that the uric-acid increase in this case, as in others, is only the result of the leucocytosis which has been caused, and as to the latter there is little reason for knowing that the drugs have the effects which have been attributed to them by Haig. It is probable enough that gouty pains in the limbs, due to the presence, no doubt, of uric acid in the part, may be relieved by

alkalines which effect the solution and removal of the acid, but it is absurd, it appears to us, to imagine nitrate of amyl or nitro-glycerin, which experience has shown to have a decided effect over the course of migraine, epilepsy, and asthma—it is absurd, we say, to imagine that in the minute doses in which they are given they could appreciably affect the solution and excretion of the uric acid in the system.

The action of this class of drugs, known to have a decided action upon the vasomotor sympathetic, is, in fact, one of the strongest arguments in favor of the sympathetic origin of the affections.

All things considered, we believe on this theory only can all the facts and all the circumstances be satisfactorily brought into harmony and explained. Only upon the assumption of the vasomotor sympathetic acting as an intermediary between the varied excitant causes can we understand how asthma, migraine, epilepsy, neuralgia and similar affections may result at some time from nasal disease, sometimes from gastric disturbance, sometimes from diseases of the reproductive organs, or how they may arise from reabsorption of toxines generated within, or how they may appear to assert themselves as mere idiopathic affections.

By condensation when possible and reproduction we have given the full argument of Dr. Wells, which, to those who have followed the extensive investigations of Dr. Haig, will prove a theme for deep reflection. The view here presented places uric acid as the smoke after the battle and as having nothing to do with the causations of the various affections with which it is generally conceded to be in excess, and not to result from changes in the food injested nor directly from flesh foods, but the result of destroyed leucocytes. One is apt to wonder why if true hyperleucocytosis always means the presence of new leucocytes, why they should so readily undergo degeneration. Dr. Wells' theory hardly explains the control which Dr. Haig was able to exercise over headache by clearing the system of uric acid or increasing its amount all within the space of an hour or so, and what he claims for migraine applies also to epilepsy, convulsions, hysteria, paroxysmal hæmoplobinuria, anæmia, etc.

While the theories of Dr. Wells are well put and appear from the point of view of his specialty to be explanatory, more work will have to be done by the most competent observers ere the prevailing conception of the deleterious role uric acid plays in a number of affections will be dropped for a theory that it is simply an innocuous excretory product, the result of nuclein destruction.

OXYTUBERCULINE IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

Through an unfortunate omission the name of the author of this article in our last number, Dr. A. J. Richer, was not given.

CRAIG COLONY PRIZE FOR ORIGINAL RESEARCH IN EPILEPSY.

The President of the Board of Managers of Craig Colony offers a prize of $100 for the best contribution to the pathology and treatment of epilepsy, originality being the main condition.

The prize is open to universal competition, but all manuscripts must be submitted in English.

All papers will be passed upon by a Committee to consist of three members of the New York Neurological Society, and the award will be made at the annual meeting of the Board of Managers of Craig Colony, October 10, 1899.

Each essay must be accompanied by a sealed envelope containing the name and address of the author and bearing on the outside the motto or device which is inscribed upon the essay.

The successful essay becomes the property of the Craig Colony, for publication in its Annual Medical Report.

Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th St., New York City, on or before September 1, 1899.

POSTPONEMENT OF THE THIRD PAN-AMERICAN MEDICAL CONGRESS.

INTERNATIONAL EXECUTIVE COMMISSION OF THE PAN-AMERICAN MEDICAL CONGRESS.

OFFICE OF THE SECRETARY.
CINCINNATI, Nov. 5th, 1898.

MY DEAR SIR:

I have the honor to announce that in April, 1898, I received from Dr. José Manuel de los Rios, Chairman of the Committee on Organization of the III Pan-American Medical Congress, a request that, in consequence of the then existing rebellion in Venezuela, no definite arrangements be made at that time relative to the meeting of the Congress previously appointed to be held in Caracas in December, 1899.

The following communication relative to the same subject is just at hand:

CARACAS, September 25, 1898.

DR. CHARLES A. L. REED,
Secretary of the International Executive Commission,
Cincinnati, Ohio.

DEAR SIR:

After having sent my communication dated April last, I find it to be my duty to notify you that, although the considerations pointed out in it have already ended, our country has been scourged by small-pox which has taken up all our physician' activities and time, depriving them of going into scientific works. And, as that state of mind of our people and government after such calamities as war and epidemic, would greatly interfere with the good success of our next meeting, I beg leave to tell you, in order you will convey it to the International Executive Committee, that our Government and this Commission would be grateful to have the meeting which was to take place in Caracas in December, 1899, adjourned for one year later. I am, dear Doctor,

Yours respectfully,
THE PRESIDENT.
(SIGNED) DR. JOSE MANUEL DE LOS RIOS.

In accordance with the request of the Government of Venezuela, and of the Committee on Organization, the III Pan-American Medical Congress is hereby postponed to meet in Caracas in December, 1900.

For the International Executive Commission.
CHARLES A. L. REED, Secretary.

Book Reviews.

Practical Uranalysis and Urinary Diagnosis: A Manual for the use of Physicians, Surgeons, and Students.—By Charles W. Purdy, M.D., LL.D. (Queen's University); Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys"; also of Diabetes: Its Causes, Symptoms, and Treatment." Fourth Revised Edition. With numerous Illustrations, including Photo-engravings and Colored Plates. In one Crown Octavo Volume, 365 pages, bound in extra Cloth, $2.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry Street, Philadelphia; 117 W. Forty-second Street, New York City; 9 Lakeside Building, 218–220 S. Clark St., Chicago, Ill. For sale in Great Britain by Sampson Low, Marston & Company, St. Dunstan's House, Fleet Street, London, E. C.

It is only about a year since we gave a careful review of this excellent manual. The present revised edition has had some extended changes, more especially in the chemistry of the urine. Obsolete methods have been omitted, and a number of new illustrations added.

It is one of the most complete books on the urine now available. After general considerations, the composition of the normal urine is taken up; then that of abnormal, urinary and anatomical sediments, gravel and calculus.

Then the diagnosis of diseases of the urinary organs and urinary disorders, and finally the urine in other diseases. An appendix gives a useful *résumé* of how to examine urine in life insurance cases, and in appendix B a consideration of the reagents and apparatus for quantitative and determinate uranalysis. In regard to specific gravity, the author states that only approximately correct results are possible with the urinometer, and considers the use of more accurate methods advisable such as may be carried out with the Westphal or Mohr balance. With the former, the specific gravity may be carried out to the fifth figure or fourth decimal. An illustration of this instrument is given, and the method of taking the sp. gr. detailed; the method with a little practice is found to be simple, rapid and absolutely correct.

The author puts great emphasis on the advantage of the centrifugal method of obtaining urinary sediments for microscopical examination and quantitative analysis, and has still further perfected his electro-centrifuge so that it now covers the entire range of centrifugal work for medical and bacteriological and other purposes. It can be worked on the interrupted incandescent illuminating current or the constant incandescent, storage or galvanic current at any voltage from 10 to 120. It is capable of all grades

of speed from 500 to 10,000 revolutions per minute, the arms having a radius of 4½ inches or 6¾ inches. A speed indicator is furnished. He has still further perfected his percentage tubes, and a new device for sedimenting and manipulating micro-organisms has been perfected and adapted to the motor with the hæmatocrit, the whole making a very convenient instrument for rapidly ascertaining the quantities of sediments, bacteria, blood corpuscles, etc., in any liquid. The necessity of knowing the exact number of revolutions per minute and taking note of the number of minutes the process is continued in regard to accurate uniform results is pointed out. In order to follow Dr. Purdy's methods, one of his centrifuges would seem to be essential. The author aims to be practical, and offers the best method to obtain speedy results as free from complicated technique as possible, so that the busy practitioner can get accurate analysis in the smallest space of time.

The Surgical Anatomy of the Lymphatic Glands. By Cecil H. Leaf, M.A., M.B. (Cantab), F.R.C.S. (Eng.), Demonstrator of Anatomy at the London Hospital. Archibald Constable & Co., 2 Whitehall Gardens, Westminster. Price 10s. 6d.

The author has made a special study of the lymphatic glands for some three years, using formalin in the preparation of the specimens. He endeavours to show in a series of colored diagrams the main groups of lymphatic glands. He hopes later on from a clinical point of view to show the areas which the various groups of glands drain. A formalin solution is forced into the veins which if used in large amounts and under a high pressure gets into the lymphatic vessels rendering them sufficiently plain for dissection. He announces the new fact that a communication exists between lymphatic vessels and veins. There are 72 pages and some eighteen full page beautifully colored plates, showing the various groups of glands. The accompanying text describes the groups so well illustrated in these plates. The book is printed in large type, and neatly bound in bluish linen, and makes a valuable supplement to the standard works of anatomy.

American Pocket Medical Dictionary.— Edited by W. A. Newman Darland, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania, Fellow of the American Academy of Medicine, &c. Containing the pronunciation and definition of over 26,000 of the terms used in medicine and the kindred sciences, along with over sixty extension tables. Price $1.25 net. W. B. Saunders, 925 Walnut st., Philadelphia. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

This is a manual of over five hundred pages, but being printed on this strong paper is only ⅝ in. in thickness. It is 6½ ins. long and 4 ins. in width. The edges are gilt, and the book is bound strongly in red morocco. It can thus be conveniently carried in the pocket. The words are printed in small but heavy type, the definition in smaller letters, but very legible. The chief terms used in medicines and the allied sciences may be found here, and a very

successful attempt has been made to incorporate the most prominent of the newer terms which yearly are added to our Medical Vocabulary, so that these are well represented. It gives instructions also in regard to pronunciation and accentuation.

A useful feature scattered through the book is the addition of some sixty tables, giving a complete list on each of the subjects so treated, such as of arteries, bruits, canals, columns, ducts, ganglia, murmurs, nerves, rales, signs of disease, tracts, etc.

This convenient and comprehensive Pocket Dictionary and withal so inexpensive should be carried by every student, and would save the practitioner in most instances the necessity of consulting his standard and more cumbrous Reference Medical Dictionary.

Saunders' Question Compends No. 7.—Essentials of Materia, Medica, Therapeutics and Prescription Writing, arranged in the form of questions and answers. Prepared especially for students in medicine. By Henry Morris, M.D., Fellow of the College of Physicians of Philadelphia; Physician to St. Joseph's Hospital, etc. Fifth edition revised and enlarged. W. B. Saunders, 925 Walnut Street., Philadelphia, Pa. Price, $1.00. J. A. Carveth & Co., Toronto, Ont., Canadian Agents.

This will prove a useful manual for refreshing the memory either for an examination or in the early years of practice. The title indicates the scope of the work. It follows the last edition of the United States Pharmacopœia, no reference being made to the preparations of the B. P. Doses have been expressed in the metrical system of weights and measures, as well as in the apothecaries' weight and wine measure. Drugs are classified according to their actions.

In the form of question and answer all the essential points in this branch of medicine are successively brought out, including prescription writing, influences that modify the effects of medicines and their administration. The book is neatly printed and bound, and is a worthy addition in its revised state to their excellent series of Compends.

PUBLISHERS DEPARTMENT.

SANMETTO RELIEVES QUICKLY IN PROSTATIC TROUBLES.

To say that Sanmetto does all that could be reasonably expected of it, in all troubles of the genito-urinary organs, is not an adequate description of its therapeutic value. For it aids in any congestion more or less, and is therefore an invaluable remedy for all congestions, especially of the prostate gland, affording relief quickly.

DRAKE, MO. H. A. GROSS, M.D.
1858 Med. Dept. Washington Univ.
(St. Louis Med. Col.), St. Louis, Mo.

SANMETTO.

J. S. Jordan, M.D., of Indianapolis, Ind., writing, says:—"I have been using Sanmetto for a number of years, and with unvarying good results. In cases of prostatitis, prostatorrhea, cystitis, chronic gonorrhea, and kindred genito-urinary troubles I find it is one of the most valuable acquisitions to our Materia Medica. In irritable conditions of the neck of the bladder, so frequent among females, Sanmetto has proven a God-send. I can also heartily recommend it as the very best aphrodisiac I have ever used."

LITERARY NOTES.

The leading article in *Appletons' Popular Science Monthly* for November will be a discussion of the origin of the peoples which originally settled middle America. Prof E. S. Morse, the author, is well known as a scientist and traveller, and his views on such a subject are of great value and interest.

Prof. Charles Richards Dodge, of the United States Bureau of Statistics, will publish in *Appletons' Popular Science Monthly* for November a very important paper on The Possible Fiber Industries of the United States. The facilities afforded by his official position have resulted in an extremely valuable contribution to the economics of this enormous industry, and the paper is of special interest just now because of our new territory, some of which is very rich in fiber producing plants of great commercial value. It is fully illustrated.

400 PRETTY HOMES AND GARDENS.

How general the use of photography is coming to be adopted by the modern magazine as a means of illustration is shown in the announcement of *The Ladies' Home Journal* that it is about to publish six new, distinct series of articles which will include not less than 400 photographs. The idea of the magazine is to present one hundred of the prettiest country homes in America, to encourage artistic architecture; one hundred of the prettiest gardens, to encourage taste in floriculture; seventy churches decorated for festal occasions of all kinds, such as weddings, Christmas and Easter services, etc.; some forty of the prettiest girls' rooms in this country; twenty-five floral porches and vine-clad houses; and the story of the native wild flowers in America, told in seventy-five photographs. Over 8,000 photographers, in every part of the country, were employed by the magazine to get these pictures, and several thousands of dollars were paid in prize awards for the best photographs. The choice was made out of over 10,000 photographs received by the magazine.

THE SENSIBLE TREATMENT OF "LA GRIPPE" AND ITS WINTER SEQUELÆ.

The following suggestions for the treatment of *La Grippe* will not be amiss at this time when there seems to be a prevalence of it and its allied complaints. The patient is usually seen when the fever is present, as the chill, which occasionally ushers in the disease, has generally passed away. First of all the bowels should be opened freely by some saline draught. For the severe headache, pain and general soreness give a five grain Antikamnia Tablet, crushed, taken with a little whiskey or wine, or if the pain is very severe, two tablets should be given. Repeat every two or three hours as required. Often a single ten grain dose is followed with almost complete relief. If after the fever has subsided, the pain, muscular soreness and nervousness continue, the most desirable medicine to relieve these and to meet the indication for a tonic, are Antikamnia and Quinine Tablets, each containing 2½ grains Antikamnia and 2½ grains Quinine. One tablet three or four times a day will usually answer every purpose until health is restored. Dr. C. A. Bryce, Editor of "*The Southern Clinic*," has found much benefit to result from five grain Antikamnia and Salol Tablets in the stages of pyrexia and muscular painfulness, and Antikamnia and Codeine Tablets are suggested for the relief of all neuroses of the larynx, bronchial as well as the deep seated coughs, which are so often among the most prominent symptoms. In fact, for the troublesome coughs which so frequently follow or hang on after an attack of Influenza, and as a winter remedy in the troublesome conditions of the respiratory tract, there is no better relief than one or two Antikamnia and Codeine Tablets slowly dissolved upon the tongue, swallowing the saliva.

THE ALIENIST AND NEUROLOGIST.

The October (1898) number of the Alienist and Neurologist contains :— "Pathology of Epilepsy," by Dr. N. Krainsky ; "Incipient Melancholia.— Its Diagnosis, Prognosis and Treatment," by John Punton, M.D., Kansas City, Mo. ; "Limited Criminal Responsibility," by Dr. W. F. Becker, Milwaukee, Wis. ; "Degeneracy Stigmata as Basis of Morbid Suspicion.— A Study by Byron and Sir Walter Scott," by Jas. G. Kiernan, M. D., Chicago ; "The Syphilitic Etiology of Locomotor Ataxia," by Dr. J. Harrison Mettler, Chicago ; "Hysteria in Relation to the Sexual Emotions," by Havelock Ellis, London ; "Heredity and Atavism," by Eugene S. Talbot, Chicago ; "Crank or Crook," by Dr. C. H. Hughes ; besides the usual Selections, Editorials, Reviews, Book Notices, etc. C. H. Hughes, M. D., Editor, 3857 Olive Street, St. Louis, Mo. Subscription : $5.00 per annum ; Single Copies $1.50.

LATE LITERARY NEWS.

It is not often that a contributor to a magazine spends five millions or so of dollars in fitting himself to write knowingly of a subject. But, if popular report be true, that is, approximately, the sum which JOSEPH LEITER expended in the acquisition of the information necessary to prepare the article which appears over his signature in the November COSMOPOLITAN on "Wheat." This is Mr. LEITER'S first appearance in literature, but he handles the pen with a bold, firm hand that shows him a man of resources.

Another COSMOPOLITAN contribution which will appeal to every man and woman is the attempt of HARRY THURSTON PECK to analyze the component parts of the modern Woman of Fascination. By what does woman fascinate ? Is it beauty ? grace ? spirit ? charm of manner ? what ? Evasive question ! But Mr. PECK goes at it as a man who has studied and has had experience

LONGFELLOW TO BE ILLUSTRATED.

Last year Charles Dana Gibson illustrated "The People of Dickens" for *The Ladies' Home Journal*. The pictures were so successful that this year, and during next year, W. L. Taylor, the New England artist who has made such rapid strides in his art, will illustrate "The People of Longfellow"—also for *The Ladies' Home Journal*. The poems selected are "The Psalm of Life," "Hiawatha," "Evangeline," "The Courtship of Miles Standish," "The Children's Hour," "The Village Blacksmith," and others.

CANADA
MEDICAL RECORD

DECEMBER, 1898.

TWO CASES OF TUBAL PREGNANCY—OPERATION—RECOVERY.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., Eng.

Fellow of the American Gynecological Society; Fellow of the British Gynecological Society; Gynecologist to the Montreal Dispensary; Professor of Clinical Gynecology in Bishop's University; Surgeon-in-Chief of the Samaritan Hospital for Women; Surgeon to the Western Hospital.

Mrs. B., aet. 33. Came under my care on 5th October. As a girl enjoyed good health. Married at 21. Had three children; last 6 years of age, after which she became a widow. Married again two years ago, since which has been ill. Conception thought to have occurred on three or four occasions, but always aborted at third month with hemorrhage and pains. Had had no menstruation for three months previous to present flow, which came on about a month ago with severe pains. Four days ago she was taken with a slight flooding and such severe pains that she became unconscious, and does not know what came away. Her physician, who had attended her for five weeks, and already diagnosed disease of the ovaries and tubes, now came to the conclusion that there might be a tubal pregnancy, and called me in consultation. I confirmed both diagnoses; that is, the presence of ruptured tubal pregnancy in a diseased tube, and advised her being brought to the Samaritan in order to remove it. She came at once in the ambulance, but her pulse was 110°, and she was vomiting constantly, so I decided to wait until she was in better condition, at the same time

being fully prepared to operate at a moment's notice should there be any sign of another hemorrhage into the peritoneum. A mass could be felt as large as a cocoanut on right side, the uterus being pushed over to the left by it, and the ovary I thought was imprisoned in the mass, because the slightest pressure on the mass caused severe vomiting for several hours. She was put on a stomach preparatlon and carefully fed until the 25th October, when her pulse and temperature came down to normal. She took $\frac{1}{30}$ gr. of strychnine three times a day during three weeks, and her bowels were put in good order. As the lump projected up under the abdominal wall I made a long incision, and on opening the abdomen found that the omentum had cleverly come to the rescue by walling off the ruptured tube and blood clot from the rest of the peritoneal cavity. The adhesions were quite firm, but were finally detached, revealing a mass of blood clot with a fœtus five inches long among them slightly macerated. She was cleaned out, and then the densely adherent right tube and ovary together with the vermiform appendix in an inseparable mass was with difficulty shelled out. The ovarian artery was tied separately and also the uterus at the cornu, and the tube and ovary removed. The vermiform appendix was cut off level with the cæcum, and the hole in the bowel closed with two rows of fine silk sutures. The other end of the appendix is still buried in the mass of inflammatory exudate in the ovary. There was no bleeding at the operation. The pulse went up to 140° and temperature 101° the night of the operation, but both were normal on the third day, and have remained so since, now four weeks since the operation. She has had no nausea or vomiting since the day after the operation, although before it she had been vomiting almost regularly for five weeks. No pain at all since the operation; has good appetite and feels well in every way. Left ovary was allowed to remain in order to avoid the discomforts of the premature menopause. Left tube was diseased and removed close to the cornu. This was my eleventh case of tubal pregnancy, all of whom recovered, and are alive and well.

My twelfth case consulted me at the Montreal Dis-

pensary. She was a Mrs. McC., 38 years of age, mother of six living children, the two last being twins, which were born four years ago. Before the birth of the twins, she says she had kept herself from bearing any children for eight years by taking large doses of senna and salts before each period was due. Several times during these eight years she had miscarriages at two or three months. She appears to have menstruated on the 7th August, the flow lasting till the 20th August. This stopped then for seven weeks, until the 9th October, when she began to flow freely, and the flow was accompanied with great pain. I sent her into the Samaritan Hospital, but she delayed until the loss of blood became quite serious, and it was not until the 23rd November that she was operated upon. By this time the left tube could be felt larger than the thumb, but fairly moveable. The uterus was dilated and curetted, although it was quite empty, but rather large, and iodine and carbolic were applied to the endometrium very thoroughly. A lacerated cervix was also repaired. Then the anterior vaginal wall was opened, and the fundus and ovaries and tubes were brought out and inspected. The procedure was difficult owing to adhesions of the ovaries and tubes on both sides, and owing to the enlargement of the left tube. It was finally brought out and tied off at the cornu of the uterus. A few cysts on the ovaries were opened, and they and the uterus were replaced and the vagina closed, one stitch taking in the fundus of the uterus. She made an excellent recovery. On cutting open the specimen, only blood clot is seen by naked eye, but I will gladly hand the specimen to the pathologist of the Society for a careful search for chorionic tissue. It was generally remarked by the medical and nursing staff of the hospital that this patient made a much more rapid recovery than after the smallest laparotomy. They all agreed that I would have completed the operation in half the time, namely, in thirteen or fifteen minutes, by the abdomen instead of half an hour, which it took by the vagina. But, from the patient's point of view the time was well spent, as she has no scar, no chance of hernia, and she had much less pain and a shorter convalescence. Although I mentioned the

possibility of tubal pregnancy, yet I was not at all sure of it, so I will classify this case as one undiagnosed before rupture and before operation. Out of the twelve, in five the abdomen was full of blood.

CLINICAL LECTURE ON BELL'S PARALYSIS.

DELIVERED AT THE MONTREAL GENERAL HOSPITAL.

By FRANCIS W. CAMPBELL, M.D., L.R.C.P.L., D.C.L.

Professor of Medicine and Neurology, Faculty of Medicine, University of Bishop's College.

The patient before you presents a typical case of what is generally called Bell's Paralysis. He comes to the Hospital to-day for the first time, though as a matter of fact he has had it for several weeks. He claims that it came on during the night, he having the previous evening, when in a state of perspiration, sat at an open window, through which a cool draught of air was blowing. The disease is also sometimes, from its situation, called Facial Paralysis. It is due to the motor division of the 7th nerve, the Portio Dura or facial nerve being involved in various ways. Its conducting power is lost, and the muscles which receive its distributing branches are paralyzed. The most common cause is a cold wind blowing on the side of the face, sitting at an open window in a room, or of a railroad car, sleeping near a cold damp wall; even exposure of the whole body to a low temperature has caused it. The pathological condition is believed to be a slight inflammatory swelling of the peripheral part of the nerve, which leads to compression of its fibres. Parotitis, tumours, swelling of the cervical glands and wounds of the cheek are also causes. In the course of the nerve within the Aqueductus Fallopii it is very apt to be involved in the severe forms of disease of the petrous portion of the temporal bone; caries and necrosis depending upon scrofulous inflammation of the tympanum. A box on the ear has produced it, and the result in more than one such case has been the discovery of a small clot pressing on the nerve in some part of its course. Inside the skull the nerve may be implicated in tumours at the base of the brain.

In such cases other nerves are generally involved, and there is distinct evidence of cerebral disturbance.

Symptoms.—Inability to move the muscles supplied by the facial nerve. If the patient laughs, frowns or smiles, one side of the face remains quiescent, and therefore destitute of expression; he cannot wrinkle the forehead, there are no creases round the eye, no dimples on the cheek or chin. The eyelid cannot be closed; in the effort the eyeball is turned up and in till it is almost lost to sight. Whistling, blowing or spitting cannot be performed. The side of the mouth cannot be drawn up. The cheek is not held close to the teeth by the bucconator muscle, and bulges out when the breath is propelled against it. For the same reason the food collects on the affected side outside of the teeth, so that it has to be dislodged by the finger. In speaking the labial consonants are uttered indistinctly. In some the mouth is drawn well over by the power of the healthy muscles of the other side, the eye stares fixedly and the entire expression of the face is comical. The exposure of the conjunctiva gives rise to a certain degree of conjunctivitis, but not so much as might be feared. This is believed to be due to the fact observed in many cases during sleep that the eyelids close either completely or very nearly. Goldzieter relates a hitherto unknown symptom. He affirms that in complete paralysis of the face, in which there is also paralysis of the velum palati, there is no lachrymation, and on the affected side the eye is perfectly dry. Smell is sometimes lost, or at least perverted, due to the dry condition of the corresponding nostril, this being due to the tears flowing over the cheek. Taste is also perverted, due to the conducting power being lost in a branch of the 7th nerve, the chorda tympani. Hearing is often abnormally acute, and is said to be a result of paralysis of the stapedius muscle, which receives a branch of the facial nerve; its antagonist, the tensor tympani, being no longer opposed, keeps the membrane too much on the stretch. Occasionally we meet with double facial paralysis when the disease is called "diplegia facialis." The whole face is expressionless and peculiar. Such cases are very often due to a growth or syphilitic gumma, involving both nerves

at the base of the brain. It is also sometimes caused by disease in the petrous portion of both temporal bones. The disease may come on gradually or suddenly. Among the first indications of its approach is inability to spit or whistle, or on waking in the morning is surprised to find his face all drawn to one side.

When the disease is fully developed, the diagnosis is easy. The only point is carefully to take note if any other nerve is involved. If such should be the case, there will be reason to suspect the presence of some basilar cranial trouble—possibly of syphilitic origin.

The prognosis is favorable in simple cases, but will take from six weeks to six months. There are, of course, cases, such as when there is necrosis of the petrous portion of the temporal bone, which are incurable. Again, a few cases get well very rapidly, say in a couple of weeks. I have had many cases of this disease under my care, but even simple cases did not show haste in cure.

Treatment.—Duchene advises farizidation, and insists on its value. Others think that some evidence of the conductibility of the nerve should be in evidence before electricity is used. When such is the case, Erbe is in favor of its employment. He advises that the anode be placed behind the ear and the cathode moved over the paralyzed side of the face, or that the two poles be placed over each mastoid process, the side affected receiving the anode. If there is any ear affection seek surgical aid. If you believe syphilis is the cause, iodide of potash, mercury, or both. In cases due to cold, counter irritation is especially called for and cantharidal collodion, fly-blisters, or even the actual cautery behind the ear, or over the occiput, are very useful. The bowels should be freely opened and diaphoretics or hot baths or alkaline diuretics administered—later, mercuri iodid and general tonics will be in order.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

THE TREATMENT OF CHOREA.

By W. ESSEX WYNTER, M. D., F. R. C. P.

Assistant Physician to and Medical Officer to the Electrical Department of the Middlesex Hospital.

In perhaps the greater number of disorders of the nervous system, the chief interest centres in exact diagnosis, owing to the complexity of the mechanism involved and the refinement of the symptomatic manifestations, together with the inaccessibility (comparative only in the days of modern surgery) of the nerve centres. The modern history of abdominal and pelvic diseases shows that with increased facility and security in direct investigation and interference the interest in inferential diagnosis is subordinated to ocular demonstration of the exact pathological condition. Such may one day be the case in some diseases of the nervous system. The very features, however, which compel our interest in diagnosis in the case of nervous diseases tend to render their treatment more difficult and perhaps less hopeful.

St Vitus' dance stands rather in contrast to most diseases of this class, inasmuch as the nature of the disorder is usually manifest, even to unskilled observers, from the first, and happily also in the prospect of recovery being complete and capable of acceleration by suitable remedies. The frequent association of chorea with a rheumatic history or actual rheumatic attack, nearly half the cases occurring subsequently to rheumatism or scarlatina, and about the same proportion being followed by functional or organic heart disease, points to the necessity of more care in such cases than is commonly exercised. It is a general practice to keep a patient with rheumatic fever to his bed long after this is necessitated by pain or fever, because of the probable involvement of his heart in the morbid process, yet the proportion of cardiac affections after rheumatism scarcely exceeds that following chorea. As a counterpart to the joint pain of rheumatism, which does not tolerate movement, may be instanced the sense of unrest in chorea, which makes control of the movements unbearable, but which is in part relieved by rest in bed; and this may also be counted on to save the physical fatigue of the movements and the state of apprehension and excitability of the mind, besides keeping the child in a place of security out of the reach of sources of excitement, persecution and accident at a time when she is unfit to take part in the studies or amusements of her companions.

The first matter of importance, then, in the cure of chorea consists in keeping the child in bed, necessitated by the tendency to endocarditis, and emphasized by its beneficial effect in shortening the disease or in bringing about a speedy cure in cases where it has existed without material benefit from drugs for weeks and months while the child remained up and about.

The drugs which have been found most useful are antipyrin and arsenic, the first in early stages and acute disease, the latter in later stages and chronic or recurrent cases. In evidence of the value of antipyrin may be quoted two cases recently treated among my out-patients at the Middlesex Hospital: (1) William A———, 16, losing the use of the right side, and suffering from jerking movements for three weeks, for whom antipyrin was prescribed in 5-grain doses three times a day, increased by 5-grains at intervals of three days till 15-grain doses were reached at the end of a week, maintained for three days, and then reduced. As the movements had almost subsided, smaller doses were continued for a week, making seventeen days in all, followed by arsenic and iron for a couple of weeks. (2) Pattie B———, 9, suffered from chorea three months. The movements affected the right arm, face and legs, the left arm being "useless." Antipyrin in 5-grain doses was given for three weeks, by which time the movements had subsided, and subsequently small doses of arsenic and iron were given for a month as a general tonic on account of weakness and anæmia. Theses cases were treated at a disadvantage as out-patients, the pressure on beds in a general hospital rendering their admission inconvenient. Their recovery was rapid, however, and there were no evidences of cardiac disease while under observation.

A further disadvantage in treating such cases while up and about is that a prolongation of antipyrin treatment, particularly in large doses, may bring out a pink erythematous eruption, giving rise to the supposition that the child has measles, which sometimes leads to interruption in attendance.

The efficiency of treatment by arsenic is often marred by insufficiency of dose. It is common practice in the case of children, who make the bulk of patients with chorea, to prescribe 2 or 3 drops of Fowler's solution. This may answer in a few mild cases, but in the majority it is insufficient, and the dose must be increased to 10 or even 15 drops in the course of ten days or a fortnight if the symptoms do not decline. A good example of this was afforded by a child of five, who was admitted to the Middlesex Hospital with extensive movements, and in whom a dose of 3 min. given for some weeks produced little or no effect; but on doubling the dose for three days, and then quadrupling it, the movements rapidly subsided. Toleration is readily secured, provided the drug is not given in too large a dose at first or the dose increased too rapidly, the medicine always being given, with sufficient dilution, immediately after food.

That the exhibition of arsenic may in same cases be carried too far and produce serious neuritis is exemplified in cases exhibited at the Clinical Society during the current year by Dr. Batten, in which 15 min. of Fowler's solution had been given three times a day. As

in the case of antipyrin rash, this accident is more likely to occur when the patient is not kept in bed, so that the intensity and duration of medication are increased to combat the unfavourable influence of activity and excitement. This furnishes an aditional reason for keeping the patients in bed and under close observation during treatment by powerful drugs.

In all the cases a liberal diet is required without stimulants, the subjects of chorea being usually of a thin and nervous type, and the disease is itself exhausting and commonly associated with anæmia and debility.

The principal complications are endo or pericarditis, which in the acute stage are best treated with salicylates, as in rheumatism. The indications are chiefly a hurried, weak pulse, with palpitation, some præcordial discomfort, and perhaps a soft blowing murmur or friction sound. They are so slight, and may be so ill-developed, that in a restless child it is easy to overlook them. Only in the later stage, contraction deformity of the valves, do the rough murmurs with evidence of cardiac enlargement and back-working show themselves.

In a few cases in which the actual movements are so violent and continuous as to bring about contusion and abrasion of skin, with exhaustion, wasting, and loss of sleep, direct sedatives are required. Chloral and the bromides are then generally serviceable, the dose being daily increased from 10 to 20 grains until either the symptom is subdued or physiological effects of the drugs produced. If this treatment fails, recourse must be had to subcutaneous injections of morphia or even the inhalation of chloroform.

When the active phase of the disease declines, the patient still needs care and treatment on account of the remaining anæmia and debility, the mental condition of hebetude and intractability, and the tendency to recurrence of the malady, apart from the more serious heart complications which may have resulted.

The best tonics are the milder preparations of iron, either the wine or citrate, with liquor arsenicalis in comparatively small doses (3 to 5 min.), or cod-liver oil; absence from competition with others, either in school or playground, for some months, which are best spent at the sea-side or in the country, where quiet amusement can be obtained without books or boisterous companions. In protracted cases and during convalescence great benefit may be derived from massage, passive exercises, or such diversion as may be obtained in the use of a skipping-rope or hoop. For the most part, it is best to avoid books and such toys as appeal to the imagination and provoke spontaneous activity of the brain.—*Treatment.*

IS THE URIC ACID DIATHESIS AN IMPORTANT FACTOR IN PATHOLOGY.

This is the title of an article by Dr. James Tyson in the *Philadelphia Medical Journal* for July 16, 1898.

At the outset Dr. Tyson defines what he understands by the uric acid diathesis. A person the subject of this diathesis secretes habitually or frequently acid, scanty, high-coloured urine, which

promptly deposits uric acid and mixed urates and oxalates. This is a clear and distinct definition, and it would be well if, in all discussions on this vexed question, the ground were as thoroughly cleared at the start.

Six divisions of the diathesis follow, in each of which some one or other of its numerous manifestations are made the characteristic feature. In the first group Dr. Tyson places the tendency to uric acid, gravel and calculus. This is a division which all will admit, but when the author proceeds to describe interstitial nephritis as due to the irritative action of the same urine on the kidney structures, he would seem to be passing from plain statements of fact into those of theory. It is impossible to prove that interstitial nephritis has any such origin, though as a theory it is plausible. In his next division Dr. Tyson includes gout. Here also all will agree with him. But here, again, we are invited to regard the not infrequent presence of interstitial nephritis in gouty subjects as due to the uric acid irritating the kidney, which is surely an unwarranted assumption. In his third group the author places a manifestation of the uric acid diathesis which used to be described as lithæmia. This term was, we believe, first used by the late Dr. Murchison in connection with what he described as functional derangements of the liver. The author attributes "bilious attacks," bad temper and irritability to this lithæmia. He also considers that this condition explains certain psychical peculiarities, such as "extreme modesty, a want of self-reliance, and a disposition to avoid society." This seems to us to place such a strain on the uric acid diathesis theory as it is unable to bear. In view of the extraordinary tendency of some observers to attribute all the ills that flesh is heir to to this uric acid diathesis, we think it a pity to discredit what is really, in proper limits, sound enough pathology, by the attempt to make it of universal application. Dr. Tyson in his fourth class places certain cases of migraine, and brings forward a case which admirably illustrates his argument. We are pleased to see, however, that he does not believe that all cases of migraine are due to uric acid in the blood, and for this we are thankful. In the fifth class we find that high tension in arteries and a tendency to arterial degeneration are included as the result of the uric acid diathesis. This may or may not be the case, but it is equally probable that both high tension and arterial degeneration may be due to some altered condition of blood due to renal disease, and totally unconnected with uric acid in any form. In his sixth and last class stands vertigo.

In the whole of these six classes the author attributes the phenomena to the action of uric acid and allied substances acting through the blood, in which they are in solution. We have already dwelt upon the danger of stretching this theory too far, and with one or two exceptions we think that this has not been done by Dr. Tyson, whose claims for the evil effects of uric acid are quite modest in comparison with those of some uric acid enthusiasts.

In the latter part of his paper the author discusses the relationship, if any, between the uric acid diathesis and rheumatism, rheumatoid arthritis, sore throat, bronchitis and asthma and diabetes.

This subject is fully and ably discussed, and we are glad to see that Dr. Tyson is far from accepting such evidence as has been brought forward to prove that uric acid in the blood is the cause of these various maladies. Incidentally, he refers to the condition which is implied under the barbarous term *uricacidæmia*. Surely it is time to protest against the introduction of such extraordinary jargon into medical literature.—*Treatment.*

WHICH CASES OF CHOLELITHIASIS ARE SUITABLE FOR SPA-TREATMENT, AND WHICH FOR OPERATION.

Dr. Hans Kehr, of Halberstadt (*Munchener Med. Woch.*, September 20, 1898), who has gained a great reputation for his operations in gallstone cases, considers it certainly wrong to send every case of cholelithiasis, without distinction, to Carlsbad, only operating when the Carlsbad treatment proves useless. He comes to the conclusion that medical treatment (Carlsbad courses, etc.) may be recommended in the following classes of patients:

1. Cases with acute obstruction in the common bile-duct, at least in the ordinary cases.

2. Cases with inflammatory processes in the gall-bladder, with or without jaundice, if the attacks occur seldom, and are not too severe.

3. Cases with frequent attacks of colic, when gall-stones are passed each time; but if the attacks of colic recur very often, without the passage of gall-stones, an operation in indicated.

4. Patient with obesity, gout, or diabetes, or when narcosis is dangerous on account of disease of the heart, lungs, kidneys or liver.

5. Patients after operations for gall-stone.

On the other hand, Kehr considers operation indicated in:

1. Acute sero-purulent cholecystitis and pericholecystitis.

2. Adhesions resulting from pericholecystitis, binding the gall-bladder to the bowel, stomach, or omentum, provided that symptoms (pains, inflammation about the pylorus, stenosis of the pylorus, stenosis of the duodenum, ileus, etc.) are present.

3. Chronic obstruction in the common bile-duct.

4. Chronic obstruction in the cystic duct (so-called dropsy or empyema of the gall-bladder).

5. All forms of cholelithiasis, which, though slight at the commencement, have resisted all balneotherapeutic and pharmaceutical treatment, and by giving rise to chronic disturbances (feeling of pressure in the stomach, wasting) embitter the patient's life and prevent him doing his work.

6. Purulent cholangitis and hepatic abscess.

7. Perforation of the bile-ducts and peritonitis.

8. Morphinism resulting from the troubles of cholelithiasis.

Kehr thinks an exploratory operation may be performed when there are frequent troublesome symptoms, and the diagnosis is uncertain. The exact diagnosis (position of the stone, etc.) and due

consideration of the patient's age, sex and social position are most important in deciding what course is to be advised. For instance, Kehr only undertakes an operation on patients over sixty years of age when their life is in danger (as by empyema of the gall-bladder or chronic occlusion of the common bile-duct).—*Treatment.*

DONT'S FOR THE TREATMENT OF PNEUMONIA.

Dr. Thomas J. Mays, in the *Philadelphia Polyclinic* (Vol. VII, No. 19), gives the following list of what *not* to do in the treatment of pneumonia:

Don't believe that acute pneumonia is a self-limited disease and will get along as well without treatment as with it.

Don't hug the delusion that fever in any degree is a benefit to the patient.

Don't fancy that you can always tell croupous from catarrhal pneumonia.

Don't allow pain in the abdomen to draw your attention away from the chest. Frequently the beginning of pneumonia is accompanied by severe pain in the right groin, which may lead one to suspect the onset of typhoid fever.

Don't direct your treatment more towards the heart than towards the lungs.

Don't fail to recognize the great influence of the brain and nervous system.

Don't lose sight of the serious indication of rapid and laborious breathing.

Don't be afraid of applying ice to the chest in rubber bags. It will do no harm.

Don't fail to apply as many bags as are necessary to cover the area of inflammation.

Don't think that you can get as good results from a tub-bath or from cold general spongings, as you can from the local application of ice.

Don't become alarmed when the ice produces a sudden drop in the temperature and think the patient is going into collapse.

Don't fail to retain the ice so long as fever is present, and resolution has not taken place.

Don't omit to apply one or two ice-bags to the head.

Don't overlook the beneficial influence of strychnine in combating pneumonia. Administer 1-20 of a grain by the mouth every three or four hours, and besides give the same dose hypodermically once or twice a day, until the system becomes irritable.

Don't omit the hypodermic injection of 1-4 of a grain of morphine once or twice a day to secure rest and sleep.

Don't fail to administer oxygen by inhalation more or less constantly if the patient is cyanotic or short of breath.

Don't fail to bleed if cyanosis and dyspnea are not relieved by oxygen inhalation.

Don't lose sight of the great value of tincture of capsicum in relieving great nervous depression, delirium, dry black-coated tongue, picking at the bed-clothes, etc., give it in from a half to one teasponful doses in water every two or three hours, or oftener, in alcoholic pneumonia.

Don't fail to give sodium salicylate, ammonium acetate, potassium acetate, and potassium citrate, three grains of each, in a dessertspoonful of peppermint-water, every three or four hours, if there is the least evidence of a rheumatic complication.

Don't overlook the important action of quinine in this disease.

Don't fail to support the patient with an abundance of nourishing food, such as milk, freshly expressed beef-juice, etc. —*American Medico-Surgical Bulletin.*

HYPNOTIC SUGGESTION IN MEDICAL PRACTICE.

In the Blackpool probate case, which occupied several days before Mr. Justice Barnes and a special jury, there has been a considerable amount of evidence of special interest to medical practitioners. The deceased, Mrs. Howard, was a patient of Dr. Kingsbury, of Blackpool, who was a member of the British Medical Association appointed in 1890 to investigate the phenomena of hypnotism, and who had previously published a book on the subject. The deceased left £30,000 to Dr. Kingsbury, and he appears to have obtained large sums of money, apart from those fees to which he was entitled, during her lifetime. The other side was particularly anxious to prove that at the time the will was made the testatrix was of unsound mind, and that Dr. Kingsbury was unduly interested in her will-making and hypnotised her. That she was weak-minded, even for a woman, is beyond all doubt, but that she was of unsound mind and of testamentary incapacity is not so clear. Dr. Kingsbury admitted he had tried to hypnotize her. On the whole, his evidence did not show him in a very favourable light, and his position did not improve during the searching cross-examination of Mr. Carson. We must agree with Mr. Carson that this was a case of

very great importance in the interest of the general public, and, we may add, also in the interest of the medical profession. He asked the jury to remember that hypnotic practice is a very serious business, only to be employed by practitioners with very great caution. Dr. Kingsbury denied he had hypnotised this old lady, although there were entries of his own in his diary in which he stated that he had done so. Mr. Carson did not suggest that hypnotism in 1894 had anything to do with the will of 1897, but what he did state was that if the patient had been hypnotised in 1894 she would remain an easy prey to hypnosis at any subsequent time, and mere "suggestion" would be sufficient to influence her in a given direction. We must dispute the statement of Dr. Kingsbury that the morals of patients could not be affected by hypnotism. Any open-minded observer who knows anything of mind must admit that in the hypnotic state the moral senses are more or less suspended, and that the dangers of hypnotism are thereby very much aggravated. A great deal of evidence on the subject of hypnotism brings clearly before us that the hypnotic subject is morally paralysed, and Dr. Kingsbury is evidently wrong in denying what is now largely accepted, though denial was the only obvious course for him. The hypnotised subject is the mere tool, not the accomplice, of the hypnotiser, who makes him or her sign documents, or commit wrong acts, and is in a state of moral suspension as surely as the epileptic in his automatic states, or the man who commits a crime in a state of somnambulism. This notable case, which has excited so much interest, comes opportunely to check effectually any disposition which may still linger to employ hypnotism as a therapeutic agent. This is but one of many alleged abuses which may be suggested by suspicious people, and medical men in their own interest will do well to give hypnotic practice, except in rare instances and in conjunction with *bonâ-fide* medical and nursing witnesses, a very wide berth. The summing up of Mr. Justice Barnes was strictly technical, and gives no indication of his views of the merits of the case. The jury could scarcely have decided otherwise than they did, because the evidence for the defence—*i. e.*, against Dr. Kingsbury, was distinctly weak. It is most unfortunate for our profession that such cases should come into court, for the public are apt to believe the worst of a medical man who extracts so much financial assistance from his patient. All the same, it will do good, if it impresses on medical men the necessity of the most scrupulous disinterestedness in their dealings with patients.—*The Medical Press*, July 27, 1898.

A PECULIAR EFFECT OF THE TOXIN OF THE BACILLUS TUBERCULOSIS.

If there be one feature more than another which characterises the mental condition of tuberculous patients, it is the tendency to take a cheerful view of the future. Curiously enough this physical aberration exhibits a tendency to become more and more pronounced as the disease advances, reaching its acme during the terminal period. When the patient first seeks medical advice he displays a very natural apprehension concerning the condition of his lungs, and is greatly depressed when he learns that there is actual disease thereof. This state of mental depression persists for some time, indeed, if circumstances are favourable and partial recovery ensues, it may last almost indefinitely. As soon, however, as the disease becomes more or less generalized the sanguine disposition takes the upper hand, and the most disconcerting facts cannot do more than provoke an ephemeral spasm of depression. When such a patient undertakes a sea voyage in order to have a better chance of recovery, that is to say, at a comparatively early stage of the disease, he expresses gloomy apprehensions lest he should never see his native shores again, but when death is at hand he no longer hesitates to plan undertakings, which cannot possibly be executed until long after the time when he will have been laid to rest. This is not a question of individual temperament, indeed it may fairly be described as incidental to the disease. We know that certain drugs are provocative of mirth, while others leave unequivocal indications of mental depression, and it is not unreasonable to suppose that the toxin secreted by the bacillus of tuberculosis exerts a specific action in this direction. Certain it is, that in no other disease, with the exception, perhaps, of certain cerebral lesions, do we meet with this extraordinary hopefulness in the face of the most disquieting symptoms, and the uniformity with which it is met with implies the presence in the organism of a disturbing influence which is constant in its incidence and exerts a disorganizing effect on the higher cerebral functions.—*The Medical Press*, July, 1898.

THE URINE OF HEALTHY INFANTS AND CHILDREN.

By FRANK S. CHURCHILL, M. D., CHICAGO.

Amount.—The daily amount of urine passed by his cases is much less than that recorded by most authors whom he had been able to consult, except Herz, whose analyses upon sixty cases, thirty girls and thirty boys, between six and fourteen

years of age, corresponded approximately with the author's experience. A comparison of his results, with those quoted by Rotch and Holt, however, showed a marked discrepancy, for which he was unable to account. He would suspect that he had not been successful in getting the whole amount of urine in his cases, had he not taken especial care in this direction. Moreover, the specific gravity confirmed the amount.

Specific Gravity.—He found a higher average than is given by the authors already quoted, a condition we should naturally expect in the urine of children passing but a small amount. Had he failed to collect the total amount, he should expect a lower specific gravity than is recorded, inasmuch as even those cases which have been thrown out had a fair admixture of night and day urine. Reliable as are the observers quoted, should we not expect to find a comparatively high specific gravity in the urine of children of this age, at a period of great physical activity with consequently greater elimination of urea? The specific gravity of the one young infant which he had been able to record is low, coinciding with the well-known observation at this period; it ranged from 1,001 to 1,005 from the twelfth day to four weeks. It is, however, generally higher during the first two days of life, before the establishment of the breast-milk. It drops after this, and continues low throughout the first year, owing to the fluid character of the infant's food. During the second year, solid food being added to the diet, the specific gravity rises, and in four cases, aged respectively twelve, thirteen, eighteen, and twenty months, he found it ranging from 1,026 to 1,030, the urine being a mixture of the day and night eliminations.

Urea.—The estimation of this constituent is perhaps the most important of all the urinary solids, being as it is an index of general metabolic activity. As we should expect from their greater activity, and as Purdy and Foster state, we find the urea excretion in children relatively higher than that in adults. The low percentage noted during early infancy is, of course, due to the quiescent state of the child. Martin and Ruge, however, report wide variations in single specimens during the first ten days of life, ranging from 0.6 per cent. to 1.9 per cent. Shiff also gives wide variations, placing averages at from .28 per cent. to 1.7 per cent. during the first fourteen days. Why there should be such a wide range in the excretion of this substance at a time of such quiescence is difficult to see. Possibly greater metabolic activity after nursing may account for it, He had no statistics upon the relative amount of urea in urine passed just before, just after and some time after feeding. The few observations he made at this age showed, with-

out exception, very low percentages, from $\frac{1}{20}$ per cent. to 0.4 per cent. lower than those cited. After the first year it rises, and from three to twelve years 133 specimens show a higher general average than that usually given. He thought Verordt's percentage, based on only seven cases, was too low. He records it as 1.1 per cent. to 2 per cent., four being below 2 per cent., one 2 per cent., and two 2.6 per cent., and one not given. This represents the adult average, whereas, so great is the physical activity of the growing child, so active is his metabolism, that a large amount of urea is formed, and while it may be argued that most of his nitrogenous food goes to the building up of the rapidly growing body, and thus the amount of urea formed in the urine would naturally be less, it would seem more rational to expect a greater elimination of this substance. Not only were his average percentages higher than the average given for adults, but individual cases showed a remarkably high percentage of elimination of urea: eight children having over 3 per cent, the highest being 3.7 per cent. The amount of urea per kilogram of body weight, while slightly higher than the ratio given for adults, is lower than that given by other observers, as we should expect from the smaller amount of urine.

Chlorides.—The chlorides were found quite constant at about 11 per cent. up to seven years, after which they were about 9 per cent.

Phosphates.—The phosphates were found to be from 8 per cent. to 11 per cent. from three to five years; 5 per cent. to 7 per cent. from six to twelve years, the adult range being about 8 per cent. It has been suggested that the smaller amount of phosphates found in the urine of children is due to the fact of the phosphoric acid being retained in the body for the growth of bone. One specimen from year-old boy showed 16 per cent., and as he was somewhat slow about teething, though otherwise perfectly healthy, the question suggested itself as to whether substances which normally go to build up the teeth were being eliminated as phosphates, and, if so, why? Digestion was absolutely normal. No conclusions, however, can be drawn from one solitary instance; the observation is merely of speculative interest.

Sulphates.—The percentage of sulphates was 1 to 1.2 per cent., slightly higher than in adults, 0.8 per cent. being their average. Purdy states that the sulphates run parallel with the urea.

Albumin and Sugar.—Neither albumin nor sugar were detected in any specimen. So much has been said about a physiological albuminuria that he had expected to find

albumin in one or more specimens. It must be remembered, however, that his cases were examined but two or three times, and some only once, and that therefore a transient temporary albuminuria might have come and gone between examintions. No deductions can be made on this point.

Sediment.—Examinations of the sediment showed nothing of especial interest in any case.

Reaction.—The reaction was acid in all cases, though, of course, varying in intensity in different specimens.

Color.—The color in most cases was pale, in the rest normal. Looked at as a whole, the records show three factors of chief importance: the small amount of urine, the high percentage of urea, and a natural result of these two, a high specific gravity. In other words, these children are passing a comparatively concentrated urine. They are all healthy, robust children, eating, sleeping, and digesting well, and of average weight. Do these records of their urine represent the urine of average American children, or of average children living under American customs and *regime?* Does the difference in nationality account for the difference in results as obtained by the investigations cited, and by those of the author. Their cases were all German children and the author's cases were American, though mostly of foreign parentage and living in an asylum. Or, is it merely a coincidence, happening among this small number of children, that they all pass a urine small in amount, concentrated in character? The number of cases is too small to draw conclusions as to the effect of race, national habits and customs of life.

An interesting feature in the table presented was a diminution in the excretion of urea per kilogram body weight at the seventh year to 0.296. During the other years, from three to twelve, the amount of urea per kilogram varied from 0.468 to 0.655.—*Pediatrics*, July, 1898.

THE CAUSES AND TREATMENT OF HABITUAL CONSTIPATION IN INFANCY.

Dr. Thomas S. Southworth read a paper with this title in the section on Pediatrics, New York Academy of Medicine. He said that from being regarded as a disease *per se*, amenable only to drugs, constipation had come to be looked upon as due to various functional disturbances of the organism. Much had been written from a theoretical standpoint regarding the peculiar anatomical conditions found in the sigmoid flexure, but his own observations on this point had

led him to the opinion that their bearing upon the occurrence of constipation had been greatly exaggerated. Among the prominent causes of infantile constipation are deficient muscular power, disturbed peristalsis, and altered consistency of the fecal masses. To these must be added the absence of voluntary effort in the infant. The speaker said that constipation in most fairly nourished infants yielded readily to a simple treatment which was largely dietetic. The fecal masses themselves should be inspected, dissolved and broken up by the physician, and in some cases even subjected to chemical analysis. We should have more extensive analyses of the healthy, normal stools in the different periods of infancy so as to establish the variations within the limits of health. It had been shown that the milk of the nursing mother could be materially modified. The percentage of fat and the total quantity of the breast milk are the chief factors to be considered in connection with the subject of constipation. Too high a proteid percentage apparently produces looseness of the bowel and colic. The quantity of the mammary secretion could be increased by giving the mother more fluid food such as cow's milk, cocoa, thin gruels made from cornmeal and well cooked flour. The extracts of malt increase the quantity of fat. Regurgitation by the infant of small quantities of milk after nursing usually indicates that the fat percentage has been increased too far, If the constipation be coincident with stationary weight, supplementary feedings are indicated. The stools would be found made up of small firm scybalæ which, when broken up, are found to contain no curds, and seem to be well digested. A constipated child may show a fair gain in weight. Good results sometimes follow the addition of cream to the dietary given before each nursing, when the stools are dry and hard. Regulation of the mother's bowels should be undertaken, and occasionally assists in remedying infantile constipation. The commonest errors in diet leading to constipation are the giving of insufficient fat or proteid, or an excess of proteid. This insufficiency may depend upon excessive or insufficient dilution with water. Many children who thrive to all appearances on commercial condensed milk are constipated in spite of the large quantity of cane sugar present, because, as usually diluted, the fat and proteids are very low and the unabsorbed residue very small. The deficiency in the proteids results in a poor development of the muscles of the abdominal wall and of the intestine. To increase the amount of condensed milk is to increase proportionately the amount of cane sugar, which is not always advisable. The alternative is to change the food or to add a teaspoonful of cream for each teaspoonful of

condensed milk. The same difficulty might arise where plain milk was given much diluted with water, and might be remedied by increasing the quantity of milk by adding cream or by the use of "top milk." The addition of both fats and proteids proves the most serviceable in the larger number of cases. One part of condensed milk represents only 2½ parts of ordinary milk. An error met with very commonly in artificial feeding is that of giving plain milk too little diluted. If dyspepsia does not ensue, there are usually colic and constipation, the stools being hard, and when broken up, showing undigested casein. The proper dilution of the milk and the addition of cream will usually remedy the constipation. The use of well cooked oatmeal gruel or jelly may sometimes be of service as a diluent for the milk. Certain non-alcoholic preparations of malt may occasionally be beneficial. The juice of half an orange may sometimes be given, twice a day, in the intervals of feeding, although it sometimes gives rise to troublesome urticara.

Two special types of constipation remain to be considered. The first of these is the rhachitic, in which the diet must be regulated and the starchy elements reduced; the second, or that form of chronic intestinal indigestion characterized by large, light colored stools of the consistency of putty. The influence of habit in securing regularity of evacuation from the bowel has long been recognized, but is often not sufficiently appreciated. It has been found that if very young infants are placed over a warm chamber at regular intervals after feeding they will very quickly be induced to have regular evacuations. It is important that children old enough to sit at stool should be provided with a support for the feet, otherwise the abdominal muscles cannot be properly brought into play. Abdominal massage would be found peculiarly useful in training the bowel to act at different periods. The child should be laid on the back and the warmed hand introduced from below upwards underneath some light covering. The tips of the fingers should then be carried from the ileo-cecal region in small circles up to the transverse colon, then across and down along the descending colon to the region of the cecum, and then the process should be repeated beginning at the same point as before. If the fingers are warm and the pressure is very light the child is not apt to cry. Five or ten minutes of such massage once or twice a day would usually be sufficient. No lubricant should be used, as it is desirable that the tissues underneath should be moved. At the conclusion of the seance, the child should be placed upon the chamber. When there is crying with defacation, and sometimes in its absence, anal fissures should be sought for.—*Pediatrics*

TEMPORARY RELIEF OF TOOTHACHE.

Under this heading we are told by Ackland in *Treatment* of June 23, 1898, to treat toothache in the following manner :—

First syringe and well wash out the cavity or cavities with a solution of carbolic acid in water (one in forty) to remove the mechanical or chemical irritants as far as possible. Now take two pieces of cotton-wool and prepare them as follows :—The first, a mere shred, soak in carbolic and water, one in twenty ; the second and larger—of a size so as to nearly fill the cavity when slightly compressed—soak in ordinary surgical colodion. Then dry out the cavity with a piece of cotton-wool, using an ordinary pair of dressing forceps, and immediately insert the shred of cotton-wool wet with the carbolic solution, followed as quickly by the large pellet of collodion wool. Should the shape of the cavity be against its retaining this temporary stopping, try to use a surface of an adjoining tooth to help to keep it in. The collodion precipitates in the meshes of the cotton, and will soon form a temporary stopping, which, although not of course preventing further decay, will generally tide the patient over for a time, without further pain. If there be more than one sensitive cavity, put a temporary stopping in each.

Inflammation of the peridental membrane and periosteum is generally a result of the death of the tooth following on the further development of a foregoing pulpitis. It is generally very easy to diagnose, as the slighest pressure on the affected tooth causes pain, and tenderness on the gum over the root or roots is always present. In the mild form it is best treated by drying the gum and painting on a liniment made up as follows :—

Liniment iodi,
Tincture aconiti, of each 1 minim ;
Chloroformi, 10 minims.

In this form it is sometimes associated with pulpitis, in which case treat the pulp first and paint on the liniment after. In a latter stage, but before suppuration has taken place, inject into the periosteum three or four minims of a one-per-cent solution of cocaine, freshly made with distilled water, or, failing cocaine, use distilled water only. Hold the point of the needle obliquely against the side of the tooth so as to guide it into the interval between the root and the alveolar bone. In the suppurative and abscess stages, poppyhead fomentations held hot in the mouth is generally the most effective treatment. They are best made by taking two ounces

of poppyheads and boiling them in a pint of water sufficiently to evaporate to half a pint in volume, straining off the liquid and using it hot. Leeches, with or without a tube, can be applied if the patient will undergo the treatment. If an abscess be present it should be drained if possible.

A great deal of relief is often given by general treatment, such as the use of calomel and mild purges.—*Therapeutic Gazette.*

THE EXERCISE TREATMENT OF LOCOMOTOR ATAXIA.

The treatment of locomotor ataxia by exercises calculated to teach the patient again the co-ordination of muscles that has been lost by degeneration of the lower sensory neurons has recently attracted considerable attention, and has won for itself the support of many neurologists, among whom may be mentioned Leydon, Jolly, Mendel, Eulenberg, Oppenheim, Gerhardt and Remak. This method of treatment was first introduced by Frankel, and has for its prime object the conversion of the simplest ataxic movement into a normal one.

In a communication to the *Deutsche Medicinische Wochenschrift*, of December 17, 1897, Frankel describes the various exercises for the hands, arms, body and legs. For exercising the upper extremities the following directions are given:—Sit in front of a table, place the hand upon it, then elevate each finger as far as possible; raise the hand slightly, extend, and then flex each finger and thumb as far as possible; do this with the right and then with the left hand. Touch with the end of the thumb each finger-tip separately and accurately; then touch the middle of each phalanx with the tip of the thumb. Sit at the table with a large sheet of paper and a pencil; make a dot at each corner of the paper and one in the center, and draw lines from the corner dots to the center dot, first with the right and then with the left hand. Put ten coins on the paper, pick them up and place them in a single pile, first with the right and then with the left hand.

For the body and legs, sample exercises:—Sit in a chair, rise slowly to erect position without help of cane or arms of chair; then sit down slowly; stand with cane, feet together; advance left foot and return it, then the same with right. Walk slowly ten steps forward and five back with help of canes. Stand without cane, but with feet a little apart and the hands on the hips; in this position stoop down by flex-

ing the knees, and rise slowly. Stand without cane with the feet separated; raise the hands from sides above the head; carry them downward and forward, and try to touch the toes. Walk along a fixed line on the floor by help of cane, placing each foot in turn on the line; then repeat without using the cane. Most of these exercises should be repeated several times, and the movements should be made with the eyes both open and closed.

Owing to disturbance of the sensory paths tabetics have lost the sense of fatigue, so there is some danger in overdoing the treatment. Two things are therefore insisted upon:—first, every movement must be done with the greatest possible exactitude, since it is not simply physical exercise that is aimed at so much as training in co-ordination; and, second, the *sèance* should not last more than eight or ten minutes, and no more than two should be allowed a day.

In the preataxic stage the exercise treatment has in a number of cases prevented the development of inco-ordination. Even in advanced sclerosis remarkable results may be obtained; in a number of instances patients bedridden for three, four and five years have been taught to walk without assistance. The improvement may last for years, if the disease is stationary or only slowly progressive. According to Frankel, the treatment is absolutely contra-indicated in cases of acute or subacute ataxia.

Kalinin (*Vratch*, No. 7, 1897), who has used Frankel's method in five cases of locomotor ataxia, draws the following conclusions:—By this treatment the loss of motion can be restored to a satisfactory degree, the gait and locomotion gradually becoming safer and firmer. The sense of locality and that of movement, and the skin sensibility, are but little improved. Romberg's symptom very soon became less pronounced. The duration of treatment should entirely depend upon the prognosis and the degree of motor disturbances present, but in any case it should not be less than a month. No ill effects were observed when the treatment was interrupted at short intervals of two or three weeks, but not longer.

Raichline, who has treated twelve cases with complete success in eight, concludes that the conditions of success are a long, as opposed to a short, course of treatment, a well nourished condition, good sight necessary for watching the movements accurately, a certain amount of energy and intelligence, not complete loss of sensibility, and the absence of arthropathies.—*University Medical Magazine*, May, 1898.

THE TREATMENT OF INCONTINENCE OF URINE IN CHILDREN WITH THE LIQUID EXTRACT OF RHUS AROMATICA.

In a recent issue of *Treatment* we find that Freyberger has used this drug with great success. He gives us a brief summary of the thirty cases of enuresis which he has treated with rhus aromatica.

In all cases spoken of "as cured" at least nine months have elapsed since enuresis had occurred for the last time.

Of the thirty patients treated with rhus aromatica, twelve are boys and eighteen girls; their ages vary from three to eleven and a half years.

At the time when treatment was begun one child suffered from anemia, two from rickets, one from rheumatism, two from chorea, five from morbus cordis, five from large tonsils and adenoids, one from somnambulism, one from pulmonary tuberculosis, and one was microcephalic; while in eleven children no concomitant affection could be found.

One boy suffered from diurnal enuresis; five boys and fifteen girls presented the combined (or continuous) form of enuresis.

The average duration of the treatment was forty days, thirty-five days in boys and forty-five in girls.

The first signs of improvement occurred on an average on or about the seventh day of treatment; the earliest on the third, the latest on the twenty-third day.

Thirty-three days on an average were sufficient to produce a permanent cure, fifty-three days to effect a permanent improvement.

Eleven boys and seven girls were permanently cured; one boy and nine girls were permanently relieved; in two girls no improvement could be achieved. A relapse occurred in three girls after an interval of some months.

A temporary exacerbation of the enuresis was noted in eight cases, three boys and five girls; it occurred during or towards the end of the first week in five cases, and during the second week in three cases. While this exacerbation lasted, the patients not only wetted their beds two or three times every night, but the quantity of urine passed into the bed each time was considerably increased. This interesting though somewhat unpleasant phenomenon lasted from four to six days, and in all cases terminated rather abruptly. During this period of flooding, the urine was always very pale; its specific gravity varied between 1002 and 1007. Considering the great disappointment which parents must necessarily feel

at this apparent change for the worse, the author made it a rule to tell the parents beforehand that such a recrudescence might possibly occur, but that it would not last long, and in all probability would soon be followed by a decided improvement.

It would be rash to claim for rhus aromatica the qualities of a specific in the treatment of enuresis in children as long as our knowledge of this drug and its action is based upon the results observed in barely one hundred cases on which reports have been published ; but so much may be said in its favor that it appears to be as efficacious as belladonna, that it may be given for however so long without the slightest ill effect, and that good results may be obtained with it where belladonna proves ineffective.

The astringent taste and disagreeable odor of the liquid extract of rhus aromatica are sufficiently disguised by syrupus aromaticus.

The dose employed was :—Five to ten minims for children two to five years old ; fifteen to twenty minims for older children.

A very convenient formula is the following :—

℞ Ext. rhus aromaticæ fl., 10 minims ;
Syrup. aromatici, 20 minims ;
Aq. distillatæ, ad 1 drachm.

S.: This amount to be given three times a day.

EXPERIMENTAL RESEARCHES ON THE EFFECTS OF DIFFERENT ANESTHETICS.

This important subject has again been taken up by Thomas and Kemp in the *Medical Record* of September 3, 1898. They tell us that, as regards ether, it would appear that this agent produces a special contraction of the renal arterioles, with a constant damaging effect upon the renal secretory cells similar to those which follow clamping the renal artery. The kidney shrinks in bulk, with consequent fall of the oncometric tracing, and accompanied by a diminution of secretion, marked albuminuria, and finally suppression. As remarked before, this condition of the kidney is not due to any change in the general arterial circulation.

These facts would seem to contra-indicate the use of ether as an anesthetic when renal disease is present, and particularly when with albuminuria there is a tendency to pulmonary edema.

The effect of chloroform upon the kidney seems to be *nil*. The oncometric curves are nearly normal, and are affected only through sharing in general circulatory changes. The secretion of urine continues up to the last moment of life, and the albuminuria is so slight that its presence at all is apparently due only to respiratory interference. Meantime the action of chloroform on the heart, as shown by carotid tracings, is directly depressing. Ether, on the other hand, shows evidence of cardiac stimulation throughout.

The A. C. E. mixture shows the special effects both of ether on the kidneys and of chloroform on the heart, either being predominant according to the mode of the administration. If a large percentage of air be simultaneously inhaled, as is the case when chloroform alone is administered, the effect is that of chloroform cardiac depression without the effect of ether upon the kidney. If, however, the A. C. E. mixture be administered more as ether is when used alone, then a study of the carotid and kidney tracing shows clearly that we have both the cardiac depression of chloroform and the renal derangement of ether combined. This seemed to cause such powerful effects upon the breathing and upon the heart that artificial respiration had to be resorted to in every dog to which this mixture was freely administered, which was not the case with either ether or choloroform. As far as the author's observations go, therefore, they fail to see any advantage in this mixture of chloroform and ether, but rather the reverse.

These objections appear to be still more applicable to Schleich's anesthetic. The cardiac depression of chloroform and the renal disturbance of ether are simultaneously developed in the tracings, similar to but to a greater degree than with the A. C. E. mixture. Schleich claims that mixtures of different anesthetics of different boiling—*i. e.*, maximum evaporation—points are safer than the administration of the anesthetic alone, on the assumption that the absorption of an anesthetic as to quantity depends upon its boiling point. The more volatile an anesthetic is, the less will be absorbed into the blood in a given time. Hence, ether, the boiling point of which is 93° F., will not be absorbed so rapidly as chloroform, whose boiling point is 143° F. If, therefore, an anesthetic could be produced whose boiling point was the same as the normal temperature of the blood, the exact amount absorbed with each inspiration would be eliminated by each expiration. By causing the mixture to be at different degrees above this point, he claims that we can regulate at will the excess which the expiration would not remove,

and thus the amount of the anesthetic retained in the blood. His addition of petroleum ether or benzine to sulphuric ether and chloroform was further to facilitate the formation of a mixture or solution of anesthetics which would afford a safer means of absorption

The authors believe that practically this reasoning is fallacious, because it assumes that these mixtures or solutions constitute a new chemical homogeneous compound which will always be inhaled as one substance in definite chemical proportions, just as a compound salt is one substance when swallowed after solution in water; whereas the fact is that ether remains ether and chloroform stays chloroform during the inhalation, and the proportion of ether which will be absorbed will depend upon the mode of administration, a tight cone allowing an amount of chloroform to be taken which would be extremely dangerous, while the free admixture with air would so lessen the absorption of ether that its specific effects would be proportionately lessened. Meantime the adoption of benzine is not the adoption of an anesthetic, for Dr. S. T. Meltzer, in a communication to the writers on his experiments upon rabbits with petroleum ether, by inhalation through mouth and nose, as well as through a tracheal canula, says:—"Petrol ether is not a narcotic. If a rabbit was put under deep anesthesia by ether, and then ether suspended and petrol ether administered, the lid reflex soon re-appeared and the rabbit woke up. The inhalation of pure petrol ether alone soon brings out a distinct tetanus and opisthotonos, to which the animal soon succumbs if the inhalation be continued. If the inhalation be discontinued at the appearance of the convulsions, the animal survives the tetanus, but this is then followed by a distinct paresis of all the extremities. If ether is given with the petrol ether, the tetanus movements are suspended, but not so paralytic after-effects; the rabbit dies of paralysis of the respiratory muscles.

There is, moreover, a physical reason for doubting the manageability of mixed anesthetics, due to the fact that if two agents of different maximum points of evaporation be mixed together, the more volatile of them will increase the evaporation of the other by carrying off more of the less volatile one than if the latter were vaporized by itself. Thus more chloroform would be inhaled if mixed with ether than if it were administered separately.

That Schleich's mixtures have been used in a number of cases without dangerous effects is no evidence that they are safe, for the same may be said of chloroform and of ether the world over. Mixed anesthetics of any kind might be em-

ployed in hundreds of instances without unpleasant results, though actually they were more dangerous than unmixed agents, for with chloroform itself surgeons have published reports of ten thousand administrations of it without one serious accident.

HYSTERIA AND BRAIN TUMORS.

Krauss (*Buffalo Medical Journal*, August, 1898) in considering the differential diagnosis of these affections, of cardinal importance to the surgeon, calls attention to the fact that all cases of suspected brain tumor with hysterical manifestations must not be considered as having been absolutely organic because death has occurred, since it is a well-known fact that a fatal termination may sometimes result from the different effects of hysteria, and it is quite a mistake to look upon the disease as always having a favorable prognosis, so far as life is concerned.

Fournier and Sollier have observed cases of spasm of the glottis in hysterical girls so severe that death ensued ; also in hysterical angina pectoris, which is generally curable, yet Potain reported a case in which death took place and in which on post-mortem examination absolutely nothing was found.

Fournier and Sollier also refer to hysterical anorexia in which there is sometimes a fatal termination, and, even should recourse be had to artificial feeding, there seems to be no power of absorption. The wasting continues and the patient dies. They also refer to the danger of forcible feeding in such cases. One of their patients who presented a marked degree of anorexia expressed a wish for some cheese, and died the same evening that she ate it. The authors point out that sudden death may occur after hysterical vomiting, and they give the notes of one such case, no lesion of any kind being found on post-mortem examination. Thus it will be seen that the utmost care is necessary in making the examination, and still greater care and caution in interpreting the meaning of the different symptoms. In a previous paper Krauss has called attention to three groups of symptoms occurring in tumors of the brain, viz., the early symptoms, the classical symptoms, and the decisive symptoms.

The early symptoms are similar to those met with in neurasthenia and hysteria, as headaches, incapacity for mental work, disordered digestion, nervous irritability, and a general malaise. The classical symptoms enumerated in the order of their importance are : (1) head pain ; (2) optic

neuritis ; (3) mental apathy ; (4) nausea and vomiting ; and as a special localizing symptom to be added to this group must be included (5) paralysis. The decisive symptom, choked disc, is the only symptom which has never been observed in the varied symptomatology of hysteria, whereas all the early and classical symptoms have been frequently noted in functional diseases. It is therefore of extreme importance that this sign should be sought for, not only at the first examination, but at every subsequent examination until its presence is determined, or its absence along with continued improvement signifies a purely functional disturbance in the patient.—*Therapeutic Gazette.*

THE PRESENT ASPECT OF THE FOOD PROBLEM OF INFANTS SUFFERING WITH GASTRO-INTESTINAL AFFECTIONS.

Prof. Ad. Czerny (*Allg. med. Central. Ztg.*, 1898, *26 and 27 ; Pediatrics*) does not discuss the treatment of the several forms of gastro-intestinal affections in the infant, but only confines himself to the generally important points which have a bearing on the therapy of feeding.

The older views are based on the rule relating to well known foods, until the right one is found ; and we must admit that not a single one of these foods is injurious, and that each occasionally affords good results. But we have not yet discovered accurate indications for each individual food.

If we would, however, pursue a plan of feeding which will surely lead to the end in view, we are met by the idea that the greatest stress should be laid on the number of bacteria it contains, or on the quality or quantity of the food. We only seem to agree that, under all circumstances, the ingestion of food should, in acute gastro-intestinal affections, be altogether discontinued for a time, say about twenty-four to twenty-eight hours, until the condition of the feces indicates that the intestine has been thoroughly emptied.

Infants suffering with gastro-intestinal affections, according to experience, bear the deprivation of food very well. If we allow them to drink bland liquids, water or tea, their weight is not diminished, but is eventually increased.

In like manner it is undoubtedly true that, under like circumstances, if we are dealing with a bottle-fed child, the introduction of mother's milk as food is greatly to be desired. In many cases this measure becomes life-saving ; in others improvement does not take place. In these latter cases the

cause of our non-success can hardly be found in the quality of the breast-milk, if this comes from a well-secreting gland.

Only the milk from a gland which is in course of retrogression, especially from one in which the secretion is rapidly lost, is undesirable, for the reason that the soluble constituents of the milk, stagnating in the breast, the sugar of milk, and also the fat of milk, are reabsorbed and respectively thrown out.

This stagnation may, however, also take place when the gland is only partly emptied. Thus it may occur where a wet-nurse takes to the breast a very sick, poorly nursing, infant.

It is, then, wrongly said: "The wet-nurse has lost her milk."

The best measure, under these circumstances, is to nurse a healthy child together with the sick one; all instruments invented for the purpose of artificially emptying the breast are imperfect.

We are obliged frequently, under these conditions, to be satisfied (when the sick baby gradually loses the gastro-intestinal symptoms), if the bodily weight only slightly increases, or even remains the same, perhaps for weeks, and we should be careful not to change the wet-nurse, or take refuge in artificial food. Vomiting is, as a rule, the last symptom to disappear.

One group of gastro-intestinal affections in all breast-babies and children, during the first few years of life, is characterized by mucous stools.

These cases, according to general experience, are most rapidly cured by a diet of cereals, with the absolute exclusion of albumen and fat. The hope which was entertained, that we might be able, perhaps, to bring about a cure of the diseased stomach and intestines by administering food free from germs, was not realized. This may, perhaps, prevent the disease, however.

Sterilization of the milk, carried to the extreme, has even produced a very disagreeable result—Barlow's disease.

The author recommends that the milk be boiled not longer than ten minutes. Neither does he believe that the curdling, in large flakes, of cow's milk is of great importance in feeding.

The endeavor of Heubner and Hofmann to increase the caloric heat-producing power of diluted cow's milk by the addition of sugar of milk is designated by the author, at least as far as sick infants are concerned, as having miscarried.

The methods of Gaertner and Backhausen to render all

oxydizable constituents of cow's milk, including the fat, equal to that of mother's milk, have also failed in the sick infant. "Fettmilch" does not quiet vomiting, but often causes it. It is to be recommended where constipation is present. But a large number of sick babies do not thrive on it.

Keller, in his experiments, has shown that the great emaciation of children suffering with gastro-intestinal diseases is caused by a disturbance of oxydation, which finds its expression in the large excretion of ammonia, *i. e.*, the acids in the circulation are not destroyed, as in the healthy infant, but are retained in the blood, and continually interfere with metabolism. It is mainly important to know, not how many calorics is contained in the infant food, and how many of them are absorbed, but how many of them are oxygenated; and it is of importance to know that an infant suffering with a gastro-intestinal affection does not at once improve even when it is fed with good breast milk, for the reason that this is not as yet perfectly oxydated, the sugar of milk remaining in part undestroyed, and therefore a great amount of ammonia is excreted.

We have also learned from observation on children suffering from gastro-intestinal affections that in feeding with cow's milk, fat as a source of acids, which are with difficulty oxygenated, may become dangerous to the health of the infant, so also many carbo-hydrates and albuminoid bodies. We are therefore practically obliged to find a food for infants suffering with gastro-intestinal catarrh, which is readily oxygenated, in which as few as possible non-oxydizable acid products of metabolism are produced, and to meet the harmful products by supplying the system with alkalies.

The attempts to render the casein of infant foods more digestible by peptonization, have also not produced encouraging results. The author declares the peptonized milks as unsuitable to infants suffering with gastro-intestinal affections; breast-milk contains neither peptones nor albuminoids.

The method recommended by Backhausen, which consists in precipitating the casein by lablenzym, and adding a solution of albumin after destroying the enzym, has not, by any means, given encouraging results. It has, moreover, never been demonstrated that the casein of cow's milk is not easily digested; at least no proof has yet been offered that the intestine is not able readily to absorb it.

The amount of albumin which is necessary to the infant (Heuber and Rubner, 6.2-6.5, *pro die*) is present even in

strongly diluted cow's milk, and there is no necessity for giving infants a food especially rich in albuminoids.

There is no reason to doubt that infants suffering from gastro-intestinal diseases are not in want of an increased supply of albumin, otherwise they would not thrive best when receiving breast-milk (which is so greatly deficient in albumin), and all experiments with foods rich in albumin, in infants suffering from gastro-intestinal affections, would not have given such bad results. Not because a milk containing much albumin favors intestinal decomposition, but because it leads to disturbances in the intermediate metabolism, with which we are at present not well acquainted. It might also be mentioned that the deleterious influence of strongly diluted milk may, in part, be explained by the fact that the large quantity of water ingested removes much of the salty constituents of the organism. These salts may, however, be replaced by adding them to cow's milk, and their removal is certainly less injurious than over-nutrition with albumin.

The volumetric method of Eschbach, which seeks to know the amount of food necessary to the child in twenty-four hours, which would be taken by a child of the same age when nursed at the breast, gives an average figure, which is only applicable to healthy infants. Sick babies should only be fed with the smallest possible quantity which is sufficient for their existence; and the author permits sick babies to drink as much as they wish, at long intervals (four hours) only; other pediatrists reduce the quantity of single meals, and shorten the intervals.

HOT AIR AS A HEMOSTATIC.

The jet of hot air from a Hollander apparatus directed upon the bleeding surface of a kidney, liver, or severed blood vessel, will arrest the hemorrhage by the formation of an eschar commencing around the edges and gradually spreading over the entire surface, mechanically checking the flow in experiments on animals, and Schneider concludes that it would be equally effective on man. The heat is only 39 degrees at 5 mm. from the apparatus, and hence is not sufficient to injure the organ. He found steam less effective and less convenient for several reasons, masking the field of operation, etc.—*La Semaine Méd.*, August 3.

SODIUM SALICYLATE FOR TOOTHACHE.

Dr. Frederick C. Coley, in an article on the medical

treatment of toothache in a recent number of the *Practitioner*, states that of all medical remedies for toothache he knows of none which is so successful as sodium salicylate. He believes it is especially useful in those cases where the pain is started by "taking cold."

A dose of 15 grains will usually relieve the pain very promptly, and if this is repeated every four hours the inflammation may entirely subside, leaving, of course, a carious tooth to be disposed of according to circumstances. The addition of belladonna is often advantageous. Fifteen grains of sodium of salicylate, with 15 minims of tr. belladonna, will often procure refreshing sleep instead of a night of agony. It is especially valuable with children, when extraction of teeth is to be avoided, if possible, lest the development of the maxilla should be injured.—*Medical Times.*

YELLOW PALMS AS A SIGN OF TYPHOID FEVER.

Filopowicz (*Centralblatt fuer die Medizinische Wissenschaften*, 1898, No. 11; *Amer. Jour. Med. Sciences*, October) calls attention [for the second time] to a symptom of typhoid fever not generally looked for. The palms and soles acquire a yellow color, which is more marked in proportion as the skin is thickened by toil, but present even when the skin is thin. This change comes on in the early days of the disease, and lasts until the end, disappearing in convalescence. The author thinks the sign due to the changes in the circulation, especially to anemia of the skin, as the result of which the subcutaneous fat shows through.—*N. Y. Med. Jour.*

SURGERY.

IN CHARGE OF

GEORGE FISK, M.D.

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospita.

TREATMENT OF PARALYSIS—TRANSPLANTATION OF TENDON.

Herr Vulpius, in speaking on the above subject before the German Surgical Society, Berlin, said that although club-foot had been successfully treated, in the paralytic form, the paralysis was not removed. This was achieved by transplantation of the tendon of a functionally active muscle. The operation was not by any means difficult. A plastic dressing was afterwards applied. Gymnastic after-treatment was of great importance. He had operated in this way in twenty-eight cases. In one case in the thigh he had transplanted the tendon of the sartorius on to the paralyzed quadriceps. The procedure was of great importance in the upper extremity. In one case of paralysis of the flexor of the fingers he had transplanted the tendon of the flexor carpi radialis on to the flexor sublimis digitorum.

Hr. Frank in a case of paralysis of the extensor of the wrist had shortened the extensor carpi radialis, and on the ulnar side had attached the extensor digitorum communis. The child, who was previously helpless, could write with the hand, knit, and dress herself. The method could also be employed in spastic paralysis.—*Medical Press, etc.*, July 13, 1898.

PAINLESS TREATMENT OF CARBUNCLES.

Dr. Sol. W. Rosenbaum describes (*N. Y. Med. Jour.*) various methods adopted for the treatment of carbuncles. Stimson, Parker, Beck, Gross, etc., regard incision as the only radical cure. A simple painless method of treatment, introduced by Dr. George H. Swinburne, "I have followed at the Good Samaritan Dispensary in over 200 cases, with uniformly good results—never having septicæmia or pyæmic sequela"— consists in injecting the following solution as an abortive in those cases which are soft and soggy :—

℞.—Glycerin.....ʒj.
Salicylic acid.....ʒv.
Borax.
Boracic acid.....āā ʒiiss—M.

Fold a piece of aseptic gauze until it forms a thickness of six to eight layers, the surface area to be somewhat larger than the carbuncle to be covered. The gauze is at first thoroughly saturated with Thiersch's solution, then covered with a layer of ten per cent. ointment of ichthyol, and then applied to the carbuncle. A piece of rubber protective large enough to overlap the gauze is now placed on the same to keep in the moisture. A layer of cotton is placed on the protective, and then the bandage is applied and allowed to stay on for two days. When the patient returns to be rebandaged, and to have the dressings renewed, the cores are found to have separated from their respective walls, and at the next redressing, which is again in two days, they are found entirely separated, and can be easily and painlessly removed. At the next visit, granulation has passed the primary stage, and healing quickly results, leaving an almost invisible scar. The only constitutional treatment which I found necessary is to give cathartics, like fluid extract of cascara sagrada or castor oil, and, in individual, anemic, or cachectic cases, compound syrup of the hypophosphites.

With this simple, but very effective treatment, I have summarized the following advantages:

1. Painlessness (a great factor with many patients).

2. Quickness of healing, more so than with other methods.

3. No scar or cicatrix remaining—important when carbuncles are in visible parts.

I have treated a patient at our dispensary who had a carbuncle, situated on the median line of the back between the scapule, measuring in diameter four inches and seven eighths; including the zone of inflammation, complete measurement reached up to seven inches. The patient was cured in five visits, coming every second day. Hardly any pain was suffered during treatment, and no cicatrix remains. —*Med. and Surg. Monitor*, July, 1898.

CARE OF SOLDIERS' FEET.

The *Medical News* of July 2, 1898, in a leading article on the care of soldiers' feet, quotes from a recent article in the *Deutsche Mil. Artz. Zeitschrift*, by Gerdeck, on the use of formalin. He recommends that undiluted formalin be pencilled over the feet three or four times at intervals of about six hours, and that four or five drops of the same fluid be dropped into the boot to disinfect it and to protect the leather. It is then a prophylactic, and enables soldiers who habitually suffer from sore feet to march without difficulty.

Even where a concentrated solution of formalin is applied to the feet a few times, the feet do not sweat again for two or three weeks.—*Treatment, Aug.*, 1898.

TREATMENT OF SENILE GANGRENE.

Prof. Thomas Jones, of the Manchester Royal Infirmary (the *Medical Chronicle*, January, 1898), formulates the following rules to be observed in cases of senile gangrene:

"1. When the gangrene is limited to one or two toes, and the patient's condition is and remains satisfactory, be content with the expectant plan of treatment, taking precautions to lessen or prevent the effects of local septic infection.

"2. When, however, the gangrene has reached the metatarsus, be prepared to carry out the high amputation—that is, amputation above the knee, or, in rare and favorable cases, through the knee-joint itself."

As the tissues of the stump may not be perfectly aseptic in these cases, it will conduce to the ultimate and more perfect union of the flaps if a drainage-tube is introduced and left in the stump for a few days.—*Treatment, Aug.*, 1898.

COLOTOMY AND COLOSTOMY.

Von Mosetig-Moorhof (*Wiener medicinische Presse* 1898, No. 3) reviews the accepted methods of forming an artificial anus, and describes a modification in technique which he has found useful in certain cases. The classical inguinal operation—that of Littré—he terms "colostomy;" it consists in bringing the descending colon up to the anterior abdominal wall, to which it is stitched, the opening into the lumen being made at once or after an interval, according to circumstances. The disadvantage of this simple operation is that it does not entirely prevent the entry of feces into the distal part of the bowel, where they stagnate and tend to set up inflammatory troubles. To prevent this, Madelung introduced true colotomy, in which the gut is cut completely across, the proximal portion brought out of the wound, and the distal closed by sutures and returned to the abdomen. This method is not entirely satisfactory, as the distal end tends to become distended by the accumulation of its own secretion, which may eventually lead to ulceration. König and Sonnenburg obviated this difficulty by leaving the upper extremity of this portion open and attached to the

abdominal wall below the artificial anus; by this means the rectum can, if desired, be irrigated from above. Another means of preventing feces from getting into the rectum is by the formation of a spur, first devised by Verneuil, whose original plan has been considerably improved by later surgeons. The disadvantage of both this method and colotomy is that they require a long and freely movable colon and mesocolon; when they are inadvisable or impracticable the author recommends the method he has himself devised. This consists in the ordinary operation of colostomy performed at one sitting, but preceded by partial occlusion of the distal portion of the bowel. A ligature is tied round this, occluding it to about one-half its diameter, and the bulging serous surfaces on either side are sewn together with interrupted stitches. An artificial construction is thus produced, which prevents the accumulation of feces in the rectum.—*University Med. Mag., Aug.*, 1898.

A NEW METHOD OF DRAINING THE PERITONEAL CAVITY.

Delageniere (*Bulletin et Mémoires de la Société de Chirurgie*, No. 12, 1898), holding that the means hitherto used for draining the abdomen after laparotomy are defective, proposes to drain this cavity in a similar way as a spirit lamp is drained by its wick. He employs a perforated nickel tube, in which is inserted a skein of absorbent cotton. This skein closely fits the interior of the metallic tube, and is frayed out as it projects from either end. Both the outer tube and the cotton can be readily sterilized, and the skein can be changed from time to time without removing the tube. In no case, the author states, should the metal tube be allowed to remain for a longer period than thirty-six hours. Excellent results, it is stated, have been obtained from this method of drainage, and, after long and difficult abdominal operations, the course of the after-treatment has thus been rendered absolutely apyretic. The nickel tubes used by the author vary in length from eight to ten centimetres, and in diameter from five to twenty millimetres.—*University Med. Mag., Aug.*, 1898.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Annual Meeting.

The Twenty-First Annual Meeting of the Montreal Medico-Chirurgical Society was held in the rooms of the Natural History Society, on Friday evening, October the 7th, 1898.

The retiring President, Dr. Robt. Craik, occupied the chair.

The Treasurer, Dr. J. M. Jack, read the following report for the session 1897-98.

Receipts.

Oct.	1.	To Cash in Bank			$ 93 05
Nov.	4.	" Rent Clinical Society, '96-97	$ 19 50		
Dec.	24.	" Cash from Lister Dinner Committee	37 41		
1898.					
Jan.	22.	Interest on Cash in Bank for 1897	4 22		
Sep.	30.	Cash, members' subscriptions	560 00		
				621 13	
					$714 18

Expenditures.

By Cash to Secretary's Current Expenses, 1897-98	$44 80	
" Charges Dr. G. Campbell, Secretary, 1896-97	50 00	
" Account Bentley, printing for session, 1897-98	36 25	
" Charges Dr. S. R. Mackenzie, Secretary, 1897-98	50 00	
" Account Electric Co., lighting for 9 months, 1897-98	14 21	
" Charges Dr. Buller, 9 months' rent, 1897-98	318 75	
" Cash, care of Hall, for 9 months	18 00	
" Account E. Cox., re Lister Address	50 00	
" Cash, Treasurer for postage, 1897-98	5 00	
" Account Davis, type-written letters, special	7 50	
" Cash, Natural History Society, rent of Hall	24 00	
		618 51
Cash Balance		$ 95 67

Assets.

Members' subscriptions overdue	$545 00	
Society furniture	210 00	
Cash on hand in Bank	95 66	
		850 67
		$850 67

Liabilities.

Account Dr. Lockhart, re cash paid for removing books	3 05	
Account M. Hicks for storage on books	3 00	
Account Sabiston Litho. Co., printing	3 75	
		9 80
Net Assets		$840 87

James M. Jack,
Treasurer.

Montreal 5th October, 1898.

The Secretary, Dr. Ridley MacKenzie, reported that eighteen regular meetings had been held during the year, the average attendance being 32. Thirteen new members had been elected during the year, making the total number of ordinary members on the roll 156. With 16 temporary members the grand total numbers 172.

The work of the year had consisted of eleven papers, twenty case reports, sixteen living cases and thirty-five pathological specimens, besides the exhibition of electrical apparatus and skiagrams.

The report of the Committee on Provincial Elections was then read and adopted without discussion, the President thanking the committee on half of the Society for the faithful and efficient manner in which it had performed its work.

The following were elected officers for the ensuing year :—

President—Dr. J. G. Adami.

First Vice-President—Dr. H. A. Lafleur.

Second Vice-President—Dr. J. M. Elder.

Secretary—Dr. A. J. Bazin.

Treasurer—Dr. J. M. Jack.

Council—Drs. Robert Craik, F. J. Shepherd and James Bell.

The retiring President, Dr. Robert Craik, before reviewing the work of the past session, spoke of the unfailing courtesy and kindness shown to him by the members, which had made his duties as chairman a pleasure as well as profit. He thanked the Society for the honour they had done him in calling over the meetings after an unavoidable absence of years. Although the work of the year had all been of value, there were a few subjects of sufficient importance for special reference. Thus the modern improvements in the different departments of surgery, especially of the uterus, gall-bladder and bile ducts; and the operations for the relief of malignant disease of larynx and tongue marked an immense advance in this department to one who, like himself, had seen the beginning of the surgery of these organs. Twenty-five or thirty years ago such operations never entered into our calculations in the most remote way, yet the progress made during this period of time was but a foretaste of what the next twenty-five years would bring about. Another point to which reference was made was the growing influence of the Society in municipal affairs. During the year our advice had been sought by influential aldermen on important sanitary matters. Of still greater importance was the reform of the College of Physicians and Surgeons of the Province which our Society has been largely instrumental in bringing about.

Stated Meeting, October 24th, 1898.

J. G. Adami, M.D., President, in the Chair.

Drs. W. G. M. Byers, C. H. Church, H. M. Church, W. M. Fisk and C. J. Edgar were elected ordinary members.

Pathological Specimens.

Dr. A. G. Nichols showed the pathological specimens, and gave the history of a case of appendicitis, with unusual changes in

the liver, a case of gastro-cholecystic fistula with diverticula in the duodenum, a case of cancer of the œsophagus.

Cancer of the Tongue.

Dr. G. E. Armstrong showed a man from whom he had removed one-half of the tongue by a modification of Buntin's method.

Charcot's Joints.

Dr. G. E. Armstrong showed a tabetic patient with marked disorganization of the right knee and left hip joints.

The Crescent form of Malaria Plasmodium.

Dr. H. A. Lafleur exhibited specimens of blood from a case of æstivo-autumnal malaria which had been under his care in the Montreal General Hospital showing the crescent form of plasmodium.

The patient, a French-Canadian, had served in the United States Army and contracted the malaria at Santiago. At the close of the war he had come to Canada and so drifted into the hospital. One feature of interest in the case was the resistance shown by the organism to quinine. After three days of observation, quinine was commenced on the fourth day, and, although under its influence the paroxysms of fever were controlled, the plasmodium was still present in the blood, though not in such numbers, when he left the hospital on the tenth day. In the quotidian or tertian fevers usually met with in Canada, from ten to fifteen grains of quinine given in divided doses was sufficient to entirely remove the plasmodium from the blood. This was the first time that the crescents had been shown before the Society, but the speaker had seen them in one case in hospital the preceding summer.

Hospital Abuse.

The discussion on this subject which was to have followed the reading of Dr. Armstrong's paper at the meeting of June was continued.

Dr. H. L. Reddy said that there was very little room for hospital abuse in the Women's Hospital with which he was connected, as the conditions were such that it was to the interest of the patients themselves to obey rules. Thus the patients were all required to pay a small amount towards their board weekly if they desired to send their children to the Foundling Institutions. If they do not pay their board they are required to nurse their children. They are warned of the danger of mammary abscess if they wean the children on leaving the hospital without having the treatment which is required on such occasions. For those who are really unable to pay the small sum demanded, it was often possible to find some one reponsible on whom the charge could be laid.

The matron who admits the patients under his directions generally found out the truth, and naturally a great deal depends on her to prevent abuse of the charity of the hospital. If there was no one whose duty it was to provide, and in all cases of the deserving

poor married women, they are admitted to the hospital free of charge.

Dr. T. G. RODDICK thought that Dr. Armstrong referred more especially to abuse in the out-patient departments of the general hospitals, and agreed that there was great abuse made of these charities. He felt, however, that the profession was more to blame than the public. The Montreal General Hospital had gone into this subject years ago and found that many, then, were in the habit of driving to and from the hospital in cabs. He advocated more rigid attention to receiving patients only on properly made out certificates given by responsible persons. He objected to the small charge made at most hospitals to poor patients, as these on receiving treatment were under the impression, in many instances, that they were paying for what they obtained.

Dr. H. A. LAFLEUR was of the opinion that the much vaunted certificates were worse than useless. Any clergyman or priest would give a certificate for the asking, and the only class that the certificates kept from coming to the hospital were those who would not take the trouble of procuring them.

Dr. ROBERT CRAIK thought that the system in vogue at the Roosevelt Hospital in New York was about the best remedy. This was that every applicant for treatment was obliged to go before an officer and register the name and other particulars and if obviously a suitable case, he or she was passed on to the doctor; if not, the case was investigated before it was accepted for treatment.

Dr. A. J. RICHER was afraid that the method of dealing with applicants referred to by Dr. Craik might put such difficulties in the way of admitting patients that it would make the system worse than the present one. In his experience in the hospitals of Paris, where a somewhat similar system was carried out, cases were not rare where patients had applied to the bureau and been refused, and had been picked up later on the streets dead. It might also cause abuse in the opposite direction. The officers whose duty it was to attend to the admission of patients were apt to take advantage of their position and become abusive to the poorer classes. At the same time he thought that it might be possible, through a central board as suggested by Dr. Armstrong, to obviate this difficulty, and thus try to relieve the hospitals of much of the present abuse.

Dr. J. M. ELDER held that certificates were absolutely worthless, and that the present means of preventing abuse were quite inadequate.

There was a certain definite floating population of hospital abusers, who present themselves for treatment with more or less regularity at the various hospitals. This class was able to pay for medical services and should be made to do so; but the real difficulty in dealing properly with them lay in the rivalry between the hospitals themselves for patients. The remedy was concerted action on the part of the different hospital authorities, so that each hospital should furnish to the others a sort of "black list" of these professional "hospital abusers," and thus render it impossible for them to get *gratis* medicine and advice they were well able to pay for.

Some such plan as Dr. Armstrong suggests must soon be adopted in justice to the hospitals, as well as to the outside practitioner.

Dr. A. E. GARROW agreed with Dr. Roddick that the physicians themselves were the worst offenders, as patients sent to any hospital with a doctor's certificate stating that they were suitable cases were admitted without question. The method in vogue for the past year at the Royal Victoria Hospital was somewhat like that advocated by Dr. Craik, and it had been found to work very well.

The PRESIDENT pointed out that clearly the main cause of the abuse of hospitals by the public, the hospital management and the profession, lay in the fact that no clear distinction was made between the hospital as a pure charity and the hospital as what is truly, a benefit society—and that it was the attempt with true British illogicality and desire to compromise, to run our hospitals as both at the same time, which was at the basis of the main abuses of which complaint is now being made.

If the hospital has been founded originally for the benefit of the poor, and if that hospital calls itself a charitable institution, it is, if not absolutely wrong, certainly most impolitic for such hospital to accept into its wards pay patients. Only those who are incapable of paying the usual fees of the practitioner should be admitted. There may be certain minor exceptions to this broad principle, but the principle exists, for what happens if this rule be neglected? Y. sees that X., who can perfectly well afford medical treatment, is admitted to the hospital, and not knowing the exact conditions of X.'s admission, is unable to see why he also should not use the hospital; what is more, as Dr. Armstrong has pointed out, when the subscribing public recognise this fact, and recognize also that the attention which they receive at the hospital is better than they can possibly receive at home, then these subscribers begin to be anxious themselves to use the hospital; and, once private wards are introduced, steadily, both the outside public and the staff of the hospital are led to urge that there be an increased number of such private wards, and so gradually and surely once the principle is admitted that those who can afford to pay the ordinary fee demanded by the ordinary practitioner can get treatment at the public hospital, the attempt of the paying public to utilize the hospital becomes evdent and becomes successful. It was a mistake for charitable institutions, such as our larger hospitals in Montreal, to allow any corporations or combination of individuals to subscribe to the hospital funds conditionally.

The working classes now-a-days have become so accustomed to the system of medical relief afforded by the benefit societies to which they belong, that almost naturally they appear to be incapable of seeing that their subscriptions to the hospital are not of the same class as their subscriptions to their benefit society. Thus it is that foremen and others receiving high wages consider themselves absolutely entitled to treatment at the hospital to which they have subscribed.

It is for our hospitals to make it clearly understood that they

only exist for those who cannot pay the ordinary fee of the ordinary practitioner. The more the President considered this subject the more he was convinced that it was a mistaken policy to have private and public wards in the same building. Undoubtedly, the better class public has of late grown to realise the admirable service afforded in our hospitals, and is beginning to demand that it should be entitled to the same advantages as the poor can now obtain. But the well-to-do have no right to ask the charities to give them these advantages. The way to satisfy this demand is for the public or sections of the public, acting more or less in concert with the medical profession, to combine and establish pay hospitals. It would even be legitimate for the existing hospitals to establish separate buildings in which they receive well-to-do patients and to employ the profits obtained from such patients for the purposes of the charity pure and simple, but, so long as pay patients and charity patients are received into the same building, and given what is practically the same treatment, for so long is it certain that those who can perfectly well afford to pay the hospital charges and the physicians' fees will attempt to benefit from the charity.

In the meantime, he was of the opinion that to lessen the evil, no better scheme could be brought forward than that suggested by Dr. Armstrong, and he hoped that this Society would use its influence to bring about the devolopment of such a system of charity organization and enquiry into the good faith of those presenting themselves for gratuitous treatment in our public hospitals.

THE

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

THE CANADIAN PRACTITIONER AND MEDICAL REVIEW.

This is to be the title of a new medical journal to appear in January next, the result of an amalgamation between the two Toronto journals, *The Canadian Practitioner* and *The Canadian Medical Review.*

We are glad to hear of this union of forces. There are too many medical journals published. It would be much better to have fewer and improve the quality. Few physicians can read more than three or four, and usually do not care to subscribe for a greater number, and, if a subscriber for a journal in any district where a number exist, he is only partially informed of the work done. Whereas, a consolidation of literary efforts in organs representing wider spheres gives a more satisfactory journal to the subscriber and will lead to a more extended list of readers for the articles of contributors. We offer our congratulations on the improved prospects afforded by this union and extend our sincere wishes for its success.

Book Reviews.

International Clinics.—A quarterly of clinical lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on treatment and drugs, by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M.D. (University of Pennsylvania), Philadelphia: J. Mitchell Bruce, M.D., F.R.C.P., London, Eng.; David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland. Volume III., eighth series, 1898. J. B. Lippincott Co., Philadelphia, Pa.; Charles Roberts, 593 Cadieux Street, Montreal, Dominion Agent.

This volume is quite up to the standard of its predecessors in regard to the quality of the articles and the standing of the writers. Among the most interesting articles are the following. "The Therapeutic Use of Alcohol," by Henry Martyne Bracken, M.D.; "The Diagnosis and Treatment of Ocular Headaches," by Casey A. Wood, M.D.; "The Principles Underlying the Treatment of Derangements of Cardiac Function," by Augustus A. Eshner, M.D.; "The Treatment of Pertussis," by Floyd M. Crandall, M.D.; "Some Observations regarding the Treatment of the Conditions generally known as Anteversion and Anteflexion," by J. C. Webster, M.D., F.R.C.P.E., F.R.S.E.; "A Case of Acute Tuberculosis associated with Ulcerative (infective) Endocarditis leading to Acute Septicaemia fatal on the fifth day," by Sir Dyce Duckworth, M.D., LL.D., F.R.C.P.; "Physical Signs in Examination of Brain Cases," by Francis Warner, M.D. (London), F.R.C.P., F.R.C.S., Eng.; Hydrocephalus, Dermoid Cyst of the Scalp, Dupuytren Exostoses of the big toe, Epithelioma of Face involving the Orbit," by Fredrick Trendelenburg, M.D. Also articles by Joseph T. Matthews, Paul F. Munde, Seth Scott Bishop, Arthur von Harlingen and a number of other writers.

A Manual of Venereal Diseases.—By James R. Hayden, M.D., Chief of Clinic and Instructor in Genito-Urinary and Veneral Diseases, College of Physicians and Surgeons, New York; Professor of Genito-Urinary and Venereal Diseases in the Medical Department of the University of Vermont, etc. New (2d) edition, revised and enlarged. In one 12mo. volume of 304 pages, with 54 engravings. Cloth, $1.50, *net*. Lea Brothers & Co., Publishers, Philadelphia and New York.

In this, the second edition of Dr. Hayden's book, the text has been thoroughly revised and brought up to date, and it is endeavored to give in a clear and compact form a *résumé* of our present knowledge of the three diseases: gonorrhoea, chancroid and syphilis. History and statistics are not included, but a practical presentation of the essential points in regard to diagnosis, prognosis, infective etiology, narcotic symptoms and treatment is given.

The numerous illustrations show the different instruments used and the method of using them, and other practical points in the management of these affections and their complications. It will be a useful addition to the library, enabling one in a very brief period to freshen the memory and fit the latest points in regard to the management of the common class of affections.

The Physician's Visiting List for 1899.—Forty-eighth year of its publication. P. Blakiston, Son & Co. (successors to Lindsay & Blakiston), 1012 Walnut St., Philadelphia.

This visiting list is arranged for from twenty-five to one hundred patients per day or month. Price from one dollar to two dollars and twenty-five cents. A perpetual and a monthly edition are also published. They are strongly bound in leather, compact and very conveniently arranged, and they are undoubtedly the most satisfactory of the various visiting lists we have examined, and are the ones most extensively used. We can unhesitatingly recommend them.

La Tuberculose, sa Prophylaxie, son Traitement. Dr. E. Vigenaud, Paris, 1898, Société d'Editions Scientifiques. Price, 3 francs.

A very interesting monograph upon tuberculosis, its prophylaxis and treatment.

This concise little book of about 160 pages treats the whole subject of tuberculosis in a most practical way. The subject is viewed in its different phases in a most able manner. The chapter upon treatment will stand the criticism of the best authorities. It gives, in a nutshell, the most enlightened ideas of the authorities of the present day, being in every way thoroughly up to date.

Les Desequilibres des Jambes. Dr. Gelineau, Paris, 1898, Société d'Editions Scientifiques. Price, 3 francs.

A monograph of 120 pages. giving detailed observations upon a number of cases of a certain form of mono and sometimes para-plegia of a transient nature, which was some years ago described by Blocq as manifestations of hysteria. The author of this little book, however, disclaims this explanation by citing minute observations made by himself of a number of cases of astasia and astasia-abasia occuring in subjects which were not hysterical.

It will prove very interesting to physicians who have to deal with neurasthenics.

Anderson's Physical Education.—We have just received from the publishers a copy of "Anderson's Physical Education." This is the latest work of Dr. W. G. Anderson, the well-known Professor of Gymnastics at Yale University. The book treats of every phase of body building, and is "up to date" in every particular. There are special chapters devoted to professional people, business men, women and children. It tells you how to decrease your weight if corpulent, and increase it if thin. It gives valuable measurement charts for both men and women.

Every reader interested in better health, greater strength, grace, self-control, elegant carriage, should possess a copy of this work.

The book is full of good suggestions for all classes. The parent who is anxious about the narrow chest of the child—the young man who is worried about his lungs and stooping shoulders—the business man on the verge of collapse—the busy editor, lawyer or minister alarmed because of an over-taxed brain and its resultant sleeplessness—the society woman who finds the adipose tissue is accumulating too rapidly over the abdomen—the housewife who can no longer climb the stairs without losing her breath—the young lady who is troubled about the bones in her neck showing and slight bust development can all find in this book much that will benefit and help them. We know of no work that gives as many useful and helpful suggestions in such compact and readable form. The illustrations, about one hundred in number, are taken from drawings and life.

The book will be sent post paid by the publishers for 15 cts. Address The Harold A. Wilson Co., Limited, 35 King St. West, Toronto.

The Medical News Visiting List for 1899. — Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, $1.25. Thumb-letter Index, 25 cents extra. Philadelphia and New York: Lea Bros. & Co.

This valuable little book appears in the same well-known form as last year with the exception that the material composing it is better if anything. To those who have used it no word of recommendation is needed, but to those who have not experienced the convenience of this compact visiting list a trial of it will reveal a boon. It contains 32 pages of data which form an invaluable guide in emergencies. The blank pages are arranged conveniently to record all manner of professional engagements and memoranda.

Diet for the Sick. By Miss E. Hibbard and Mrs. Emma Drant, matrons at two large hospitals in Detroit. 103 pages; board sides, postpaid, 25 cents. The Illustrated Medical Journal Co., Detroit, Mich., publishers.

This is the Third Edition of this handy and popular little bedside book. The recipes for sick dishes have all been tried, and are those largely used by the Detroit hospitals where the two contributors of them served as matrons. Added to these are various Diet Tables, as for: Anæmia, Bright's Disease, Calculus, Cancer, Consumption, Diabetes, Dyspepsia, Fevers, Gout, Obesity, Rheumatism, Uterine Fibroids, etc., as given by the highest authorities. The booklet is intended to be given to the family by the physician, and for such purposes one half dozen will be sent, prepaid, on receipt of $1.00.

PUBLISHERS DEPARTMENT.

NERVES AND FOOD.

Sir Henry Thompson, writing in the *Nineteenth Century*, makes the following remarks upon the altered diet which has become necessary, owing to the extraordinary changes affecting man in every rank of life and his surroundings in all parts of the civilized world, which have taken place during the last sixty years: "It is difficult—perhaps impossible—for the present generation to realize the contrast presented in respect of the demand now made on man's activity, especially that of his brain, during, say, the last thirty or forty years, with that which was required by the routine of life as it was in the 'thirties.' The wear and tear of existence has enormously increased, and the demand for rapid action and intense exertion by the nervous system is certainly tenfold greater now, to make a moderate estimate, than it was then. A railway appeared in the first year of the decade named; the penny post and the electric telegraph not until its close; while the press, both daily and weekly, now gigantic, was then, by comparison, insignificant and diminutive. For the great majority, even of business-men, life was tranquil and leisure plentiful, while competition was almost unknown; I need not attempt to describe what it is now. Such changes have naturally been the cause of permanent injury to many whose powers sufficed for the quiet time but gave way in large and increasing number under the inevitable struggle which issues in 'the survival of the fittest.' The necessary result of this extreme demand for brain activity, since that organ is the sole source of energy on which all the functions of the body, including that of digestion, depend, is an insufficient supply for this important process. Under these circumstances nothing can be more important than to provide food of a kind and in a form which will economise the work of the stomach. It must not be bulky; much of it may be advantageously soluble in form so as to be readily and easily assimilated, even pre-digested sometimes, and when solid not requiring much mastication. I have found nothing which fulfils these conditions so completely as the various concentrated extracts of meat which are now so extensively used. A teaspoonful of sound beef extract in a breakfast-cup of hot water when the brain is fatigued and the stomach unfit for work is often the best antidote possible, reinvigorates the system, and prepares it for a light meal or for a little more work, as the case may be—a result far too frequently sought through the pernicious habit of obtaining temporary relief in a glass of wine or spirit."

Several features of striking interest will be found in the opening numbers of THE LIVING AGE for the new year. The number for January 7 contains, among other things, a pungent and wholesome lecture on Art and Morality, by M. Ferdinand Brunetiere, which is translated for the magazine and copyrighted by it; the first instalment of The Etchingham Letters, which are attracting wide notice in The Cornhill by their cleverness, and the beginning of a short serial. The number for January 14 gives the full text of Lord Rosebery's recent address on Literary Statesmen, which has been the subject of general comment; an article from Blackwood's on The Ethics of Conquest, which relates to the Philippines; and a bright paper on The Madness of Mr. Kipling.

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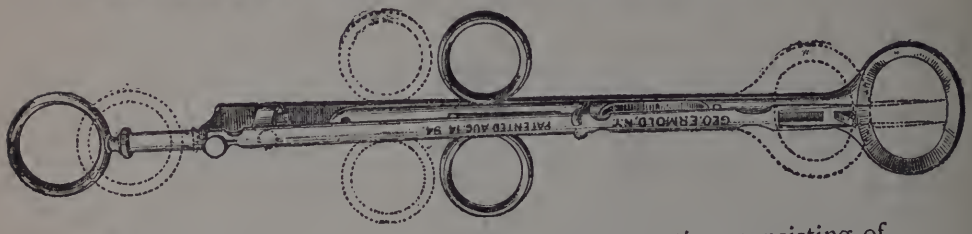

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TWENTY YEARS' USE OF MALTINE. By HENRY E. MERENESS, A.M, M.D, Albany, N.Y. Twenty years ago (Feb. 1st, 1873), I began the practice of medicine in Albany. Soon after that time my attention was called to Maltine Plain and to Maltine with Cod Liver Oil. I have prescribed these and the other Maltine preparations ever since, with the happiest results. Particularly so in wasting diseases such as consumption and anæmia, and other conditions in which debility or feeble digestive powers seemed to call for remedies of this class. More recently I have given especial attention to Maltine with Coca Wine, and find it to be a most valuable addition to the Maltine list. In all these twenty years I have felt the greatest confidence and reliance in the use of the Maltine preparations, and have never been disappointed. The Maltine Company has kept fully abreast with the many brilliant achievements that have been attained in modern pharmacy.—*Chicago Medical Times*, April, 1895.

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